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# Minerals in the East Mojave National Scenic Area, California: A Minerals Investigation Volume I



U.S. Department  
of the Interior  
Bureau of Mines



**MINERALS IN THE EAST MOJAVE  
NATIONAL SCENIC AREA, CALIFORNIA:  
A MINERALS INVESTIGATION  
VOLUME I**

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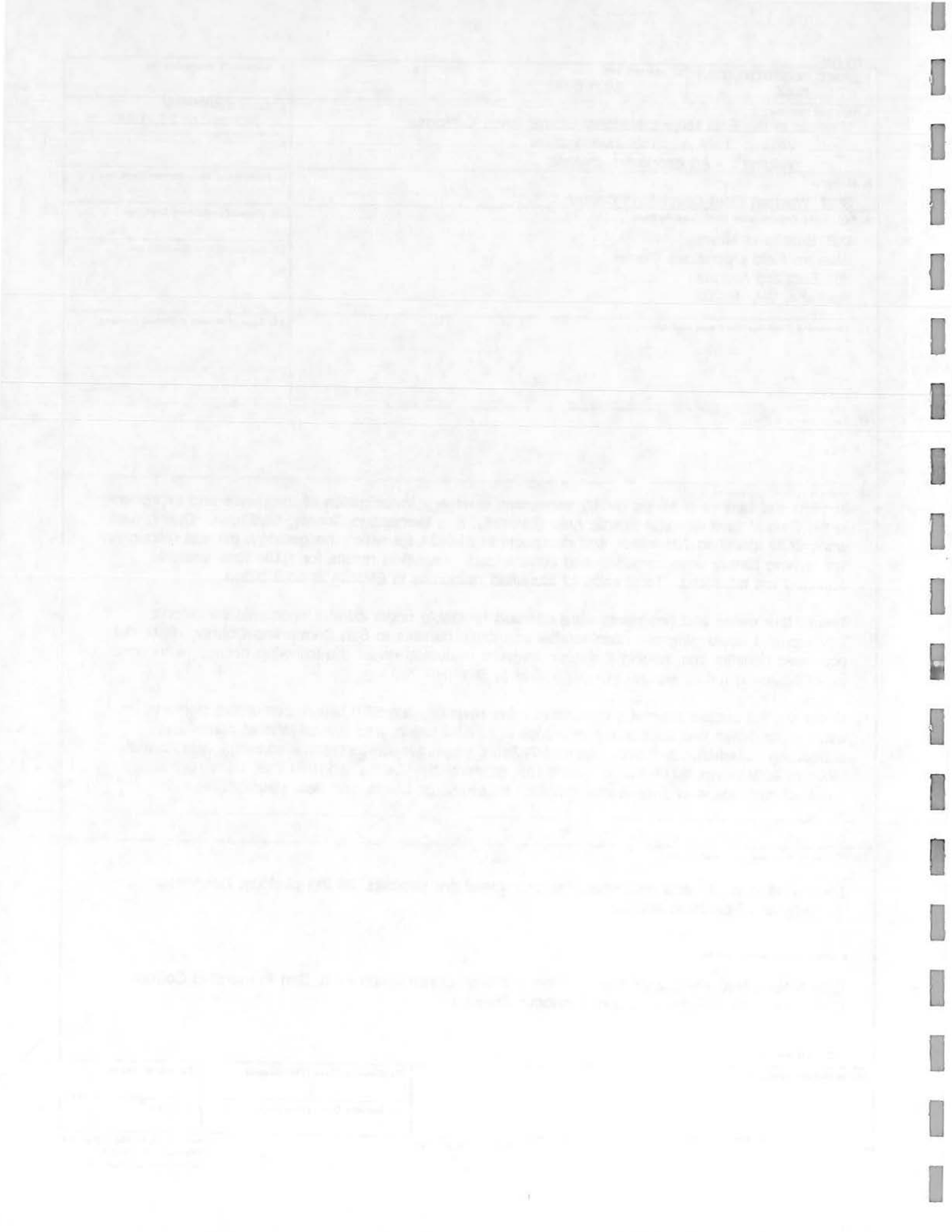


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<b>16. Abstract (Limit: 200 words)</b> <p>In 1990, the Bureau of Mines (BOM) conducted a mineral investigation of the mines and prospects in the East Mojave National Scenic Area (EMNSA), San Bernardino County, California. During field work, BOM identified 701 mines and prospects in EMNSA for which the geology, mineral resources, and mining history were compiled and summarized. Analytical results for 1,188 rock samples collected are tabulated. Total value of identified resources in EMNSA is \$5.0 billion.</p> <p>Twenty-four mines and prospects were deemed profitable under current economic conditions. Development could generate considerable economic benefits to San Bernardino County. Potential economic benefits from mining the deposits were evaluated under the following access restrictions for EMNSA: 1) full access, 2) HR 3460, and 3) S 11/HR 780.</p> <p>Under the full access scenario, cumulative mine revenues are \$3.0 billion, cumulative personal earnings at mines and supporting industries are \$0.94 billion, and annual jobs at mines and supporting industries are 2,379. Under HR 3460, mine revenues, personal earnings, and annual jobs are \$2.9 billion, \$0.88 billion, and 2,165, respectively. Under S 11/HR 780, mine revenues, personal earnings, and annual jobs are \$1.0 billion, \$0.32 billion, and 936, respectively.</p>			
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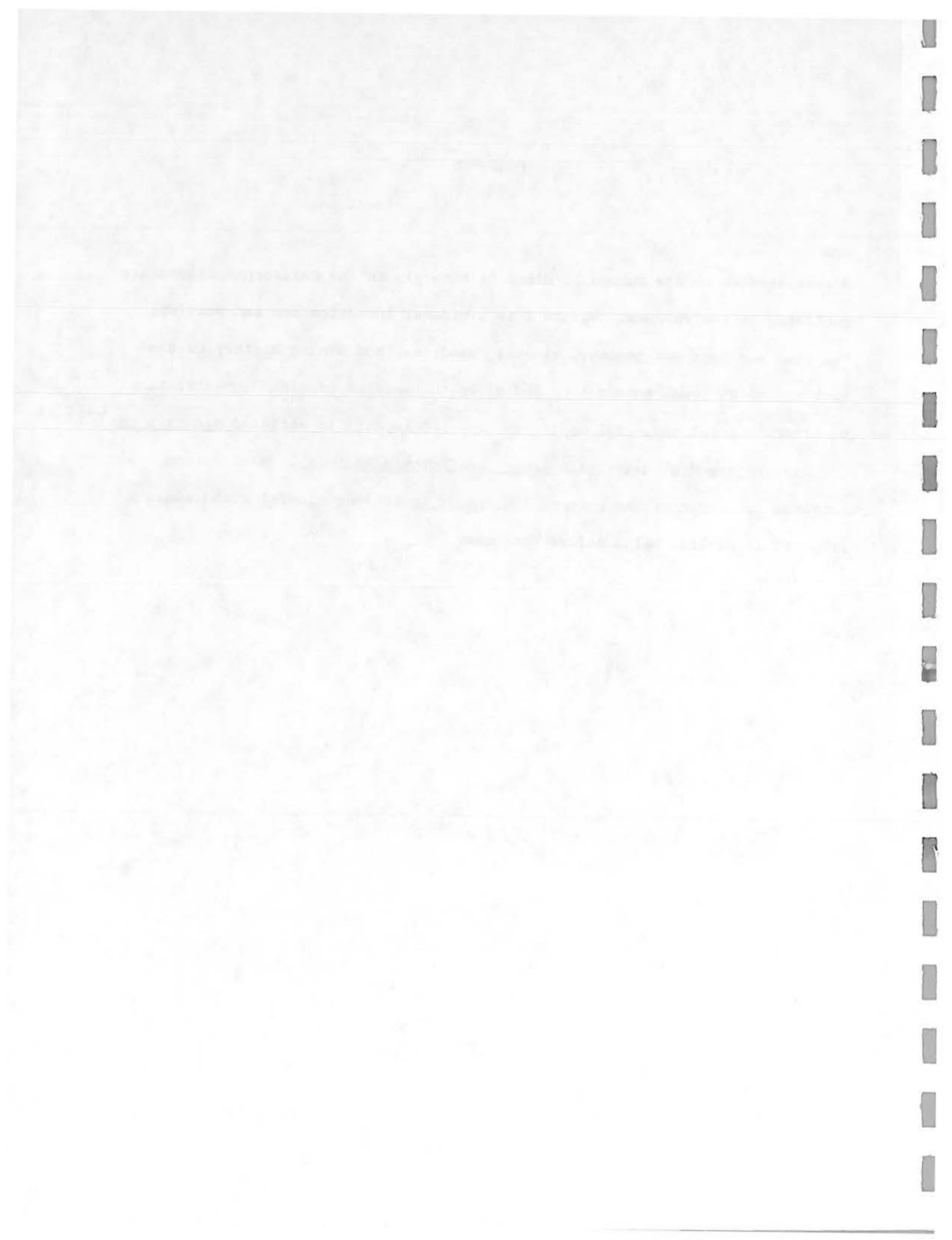




## FOREWORD

Recent studies by the Bureau of Mines of minerals in the California Desert are published in two volumes. Volume I is a mineral investigation and provides the mine and prospect geology, mineral resources, and mining history of the East Mojave National Scenic Area and gives the results of field investigations of minerals locations. Volume II, a companion report, is entitled Minerals in the East Mojave National Scenic Area: An Economic Analyses. That volume provides estimates of the potential economic impacts of mineral withdrawals proposed in several bills before Congress.





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Minerals In The East Mojave National Scenic Area, California:  
A Minerals Investigation

INTRODUCTION

The U.S. Bureau of Mines Western Field Operations Center, Spokane, WA, conducted reconnaissance level field work to confirm location and character of mineral deposits and contacted mineral industry officials for mineral resources information concerning the 1.5 million acre East Mojave National Scenic Area (EMNSA) in Southern California. Proposed for a National Park, the EMNSA is part of the Bureau of Land Management (BLM) Needles Resource Area, which is one of five BLM Resource Areas in the 25-million-acre California Desert Conservation Area (CDCA) (figure 1).



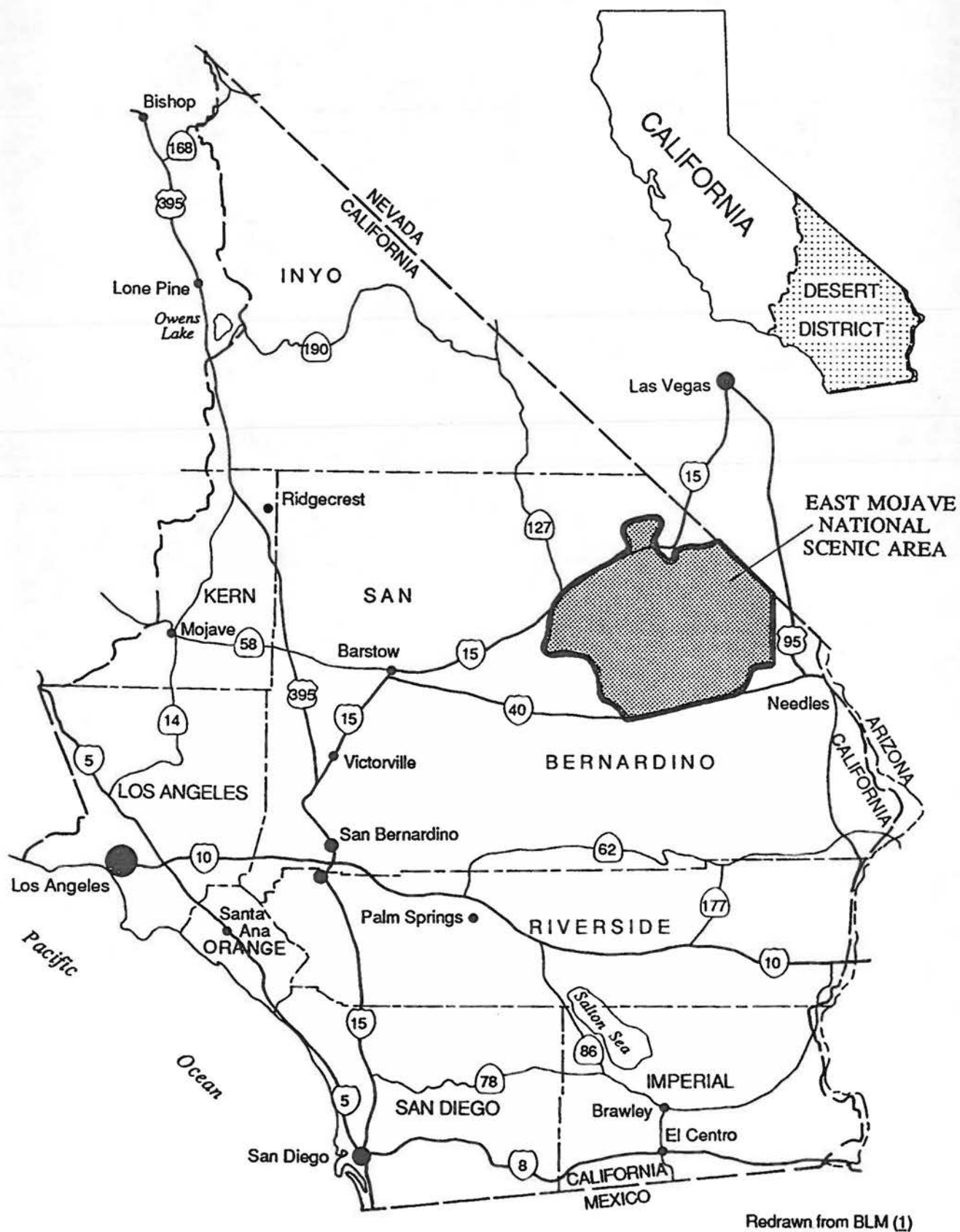


FIGURE 1.— Location map--East Mojave National Scenic Area, San Bernardino County, CA





## ACKNOWLEDGMENTS

The Bureau's investigation in the East Mojave National Scenic Area is supervised by William N. Hale. Field project work over a period of 30 days from January 23 to March 15, 1990, was under the leadership of Harry Campbell (Castle Mountains, Castle Peaks, Lanfair Valley, Piute Range), J. Douglas Causey (Ivanpah Mountains), Michael Horn (Van Winkle Mountains, South Providence Mountains), Andrew Leszykowski (Vontrigger Hills), Ronald Mayerle (New York Mountains, Mid Hills), Edward McHugh (Kelso Dunes, Kelso Mountains, Granite Mountains), Michael Miller (Clark Mountains), Terry Neumann (Fenner Hills, Hackberry Mountain, Woods Mountain), Jerry Olson (Providence Mountains, Marl Mountains), Thomas Peters (Mescal Range, Cinder Cones, Lava Beds), Richard Rains (Cowhole Mountains, Old Dad Mountain, Soda Dry Lake).

Industry contacts, made during January and February, 1990, for mineral resource information were accomplished by Steven Munts and Richard Thompson. Mining industry firms contributing mineral production and resource information are: Aiken Builders Products; ALII Enterprises, Inc.; Atlas Gold Mining, Inc.; Bond International Gold, Inc.; Canyon Resources Inc.; Channel Resources Co.; Cominco American Resources, Inc.; Corona Corp.; Cyprus Mines Corp.; Echo Bay Mines, Ltd.; FRM Minerals, Inc.; Gold Fields Mining Corp.; Homestake Mining Co.; Huntington Tile, Inc.; Kennecott Corp.; Noranda Exploration Inc.; Pegasus Gold Corp.; Pfizer, Inc.; Placer Amex, Inc.; Placer Dome, Inc.; Pleuss-Staufer Inc.; Santa Fe Pacific Minerals, Corp.; Teutonia; Tungsten Springs Mining Co.; Vanderbilt Gold Corp.; Viceroy Gold Corp.; West Gold Exploration and Mining Co., Inc.; and Wind River Mining Co.

Harry Campbell organized and coordinated data from dBase to WordPerfect files and coordinated efforts in numbering the map and tables, mines and prospects. Jerry Olson organized analytical data directly from lab files, printed tables, and prepared mineral production and resource maps and tables. Steven Munts prepared the mines and prospects map and organized a unique map-numbering system. Photographs of mines in and near the EMNSA were contributed by Harry Campbell, J. Douglas Causey, W. N. Hale, L. Michael Kaas, Andrew Leszykowski, Ron Mayerle, M. Miller.

#### METHODS OF INVESTIGATION

Location of mineral sites were determined by a search of historical mining references at the Bureau's Spokane library, by the perusal of current mining claim records, and by interviews with claimants and local residents. Mineral resource information was obtained from individual company files concerning specific exploration and development projects. Less than 300 mines and prospects were identified previous to field studies. During the 1990 field work, Bureau of Mines personnel investigated, by sampling and mapping, if necessary, to confirm location and character of mineral deposits in the EMNSA. In addition, the areas were traversed by foot, four-wheel-drive vehicles, and helicopter to search for any mineralized sites not reported in the literature. This investigation identified 701 mines and prospects (Table 1, Plate 1), more than double the prefield inventory.



### Sampling and Analytical Procedures

Five types of rock and placer samples were taken during the Bureau investigation: 1) chip - a regular series of rock chips taken in a continuous line across a mineralized zone or other exposure; 2) random chip - an unsystematic (unmeasured) series of rock chips taken from an exposure of apparently homogeneous rock; 3) grab - loose rock pieces taken unsystematically from a dump, stockpile, or float; 4) select - pieces of rock chosen, generally from the apparently best mineralized parts of a pile or exposure, or of any particular fraction (e.g., quartz, host rock); 5) pan - samples of surficial sand and gravel, generally one or two level, 14-inch pansful, concentrated on site to check for the presence of gold or other heavy detrital minerals in placers.

Sample analytical results are tabulated for the 1,188 samples collected in the EMNSA study in the appendices.

Rock samples were sent for preparation and analysis to Chemex Labs, Inc., Sparks, NV, to determine the presence of metallic minerals and rare earths; 1,099 samples were analyzed by neutron activation (INAA) for 29 elements 1/ and by fire assay and inductively coupled plasma (ICP) methods for several elements 2/ to detect unsuspected elements of possible significance (Appendix Table A-2).

To determine the presence of non-metallic minerals, 77 samples were analyzed by whole rock analysis (Appendix Table A-3) for limestone, dolomite, and silica characterization, and 9 samples were analyzed by X-ray diffraction (Appendix Table A-4) for clays, zeolites, and talc determinations. Three samples were sent to the New Mexico Bureau of Mines, Socorro, for perlite testing (Appendix Table A-5).

Placer samples (Appendix Table A-6, 22 samples) partially concentrated in the field were further concentrated on a laboratory-size Wilfley table at Western Field Operations Center, Spokane. The resulting heavy mineral fractions were scanned with a binocular microscope to determine heavy mineral content.

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1/ Gold, antimony, arsenic, barium, cerium, cesium, chromium, cadmium, cobalt, europium, iron, lanthanum, lutetium, molybdenum, nickel, niobium, samarium, scandium, selenium, silver, tantalum, tellurium, terbium, thorium, tin, tungsten, uranium, ytterbium, zinc.

2/ Copper, fluorine, lead and platinum were sometimes additionally analyzed by FA/ICP methods to determine their economic significance.

## MINES AND PROSPECTS

Descriptions of mines, prospects, and samples, production information, and important chemical analyses are listed (Table 2). For a number of the mines and prospects, no significant sample analytical results were obtained, either because economically important minerals were not present in the samples or because the mine or prospect workings were too severely caved to permit sampling the mineralized rock.

Many high gold analyses were of select samples of highly mineralized material scattered or piled on the dumps since the majority of mine and prospect workings examined were caved. These high analysis cannot be considered representative of an average grade that might be developed at the sample site; they can indicate exploration targets. For instance, several exploration targets for cobalt (Plate 2), a strategic mineral in short supply, might be indicated by threshold values over 300 ppm at the Lost Burro (Map No. 574, Providence Mountains), Mammoth Mine (Map No. 3, Clark Mountain), El Lobo mine (Map No. 339, Little Cowhole Mountains), Unnamed prospect (Map No. 343, Cowhole Mountains), Gyron (Map No. 347, Seventeenmile Point), Black Fox (Map No. 360, Seventeenmile Point), and Paymaster mine (Map No. 353, Seventeenmile Point).

## PRESENT MINING ACTIVITY AND IDENTIFIED MINERAL RESOURCES

Bureau of Land Management (BLM) records (1989) indicate that most of the high grade sample localities found in the study area are probably covered by mining



claims. Most current mining-related activity is limited to annual assessment work. Minerals exploration has been persistent and was underway by major mining companies at numerous metallic and non-metallic properties throughout the study area as indicated by the identified resource compilation from mining firm files (Tables 3 and 4, Plate 2).

More than 13 firms and individuals have conducted exploration and/or development activities for metallic mineral commodities (Table 3) including: Placer Amex, Inc. (Big Hunch property), Viceroy Gold Corp. (Castle Mountain project), Bond International Gold, Inc. (Colosseum mine), Channel Resources Co. (Denver mine), Atlas Gold Mining, Inc. (Golden Quail project), Homestake Mining Co. and Vanderbilt Gold Corp. (Ivan Group), Prince Smith (Juniper Group), Wind River Mining Corp. (Lucky mine), Noranda Exploration, Inc. (Rattlesnake gold prospect), Joseph Owens (Telegraph mine), Dr. Ralph B. Pray (Teutonia mine), Vanderbilt Gold Corp. (Morning Star mine, Ivan group, Vanderbilt mine).

Non-metallic exploration activities have been reported by more than nine firms and individuals (Table 4) including: Homestake Mining Co. (Copper Queen mine), FRM Minerals, Inc. (Getchell clay), Pfizer, Inc. (Ivanpah Limestone), Huntington Tile, Inc. (P-1 open pit), Pfizer, Inc. (Sericite pit), Pleuss-Staufer Co. (Limestone), Loyd Metzner (Rainbow group), ALII Enterprises, Inc. (White Hart No. 1), Aiken Builders Products (Aiken mine, Cima mine).

Two gold mines the in the study area currently (1990) are producing (Colosseum, Plate 2, Map No. 37, and Morning Star, Plate 2, Map No. 178), Table 5, and about 325,000 ounces of gold have come from these operations

since 1986.

The Castle Mountain project (Plate 2, Map No. 329) is on line for gold production in 1990, pending the approval of mine operating plans. The Aiken operation (Plate 2, Map No. 376) currently produces about 25,000 tons per year of volcanic cinder. Kaolin production, recorded since 1933, is intermittent from the C-1 clay pit and P. S. Hart clay pit, and output from these open pit mines was last reported in 1986.

Identified metallic mineral resources include estimates for gold, iron, molybdenum, silver, and tungsten, Table 6, Plate 2. Based on an average price per unit for mineral commodities from USBM Mineral Commodity Summaries (1990) and USBM Mineral Facts and Problems (1985 edition), the value of identified metallic resources in the EMNSA totals \$1.9 billion.

Identified non-metallic resources include estimates for volcanic cinders, clay, dolomite/limestone, fluorite, perlite, stone (decorative), and talc, Table 7, Plate 2. Based on an average price per unit for mineral commodities from USBM Mineral Commodity Summaries (1990) and USBM Mineral Facts and Problems (1985 edition), the value of identified non-metallic resources in the EMNSA totals \$3.1 billion, Table 7.

The total value of identified mineral resources in the EMNSA is \$5.0 billion, or \$4,150 per acre.

Photographs of some mines with recorded production of gold, silver, copper, lead, zinc, iron, tin, tungsten, rare earths, volcanic cinders, and talc

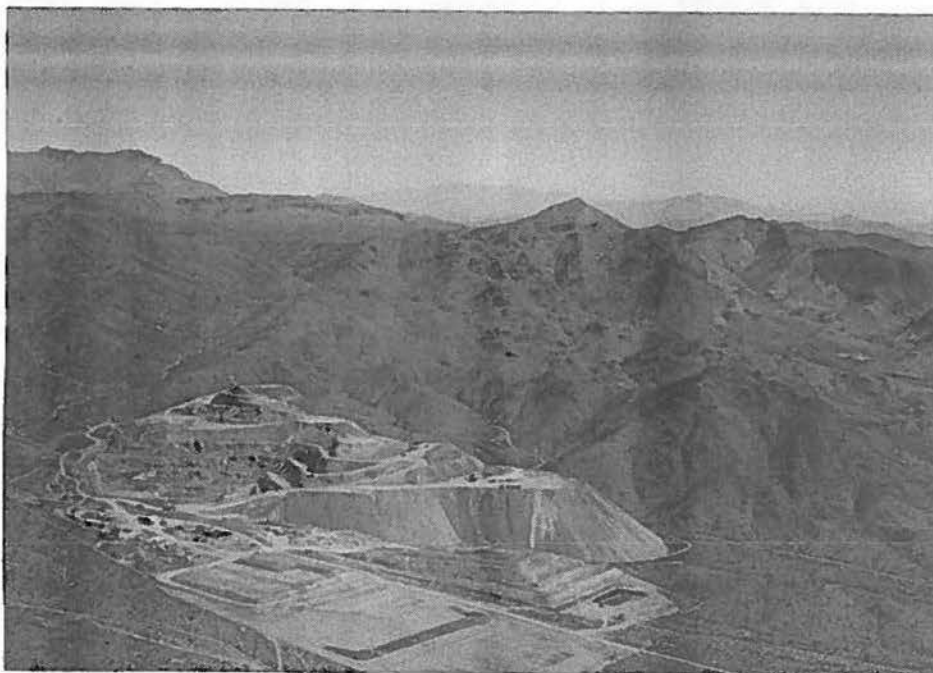
include operations of Colosseum, Morning Star, Castle Mountain Project, New Trail, Beatrice, Monitor, Copper World, Mohawk, Sagamore, Vulcan, Evening Star, Standard No. 2, Aiken, Erin/More-Lite, Sericite, and Mountain Pass.

# GOLD MINES



Colosseum mine  
 Juniper Fluorite Mine, 1  
 Mojave Tungsten mine, 2

Map No. 57  
 Map No. 45  
 Map No. 39



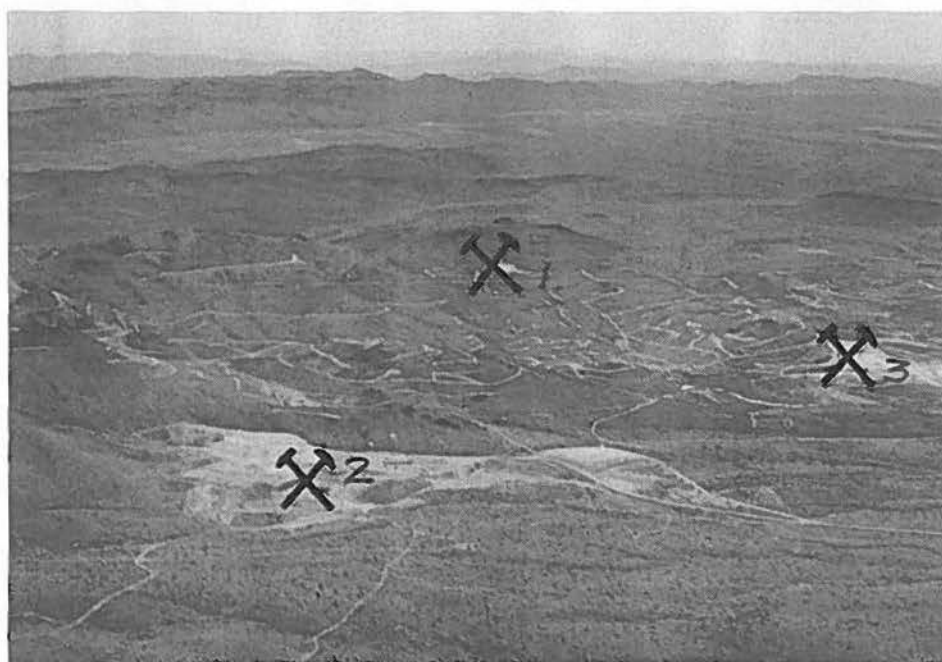
Morning Star mine

Map No. 178






GOLD MINE AND DEVELOPMENT PROJECT



Castle Mountain project


Map No. 329

Huntington Tile clay,  1

Map No. 332

C-1 Clay pit,  2

Map No. 321

P. S. Hart Clay pit,  3

Map No. 328



GOLD MINE AND DEVELOPMENT PROJECT (Cont'd)



New Trail mine

Map No. 163



SILVER MINES



Beatrice mine

Map No. 21



Monitor mine

Map No. 22



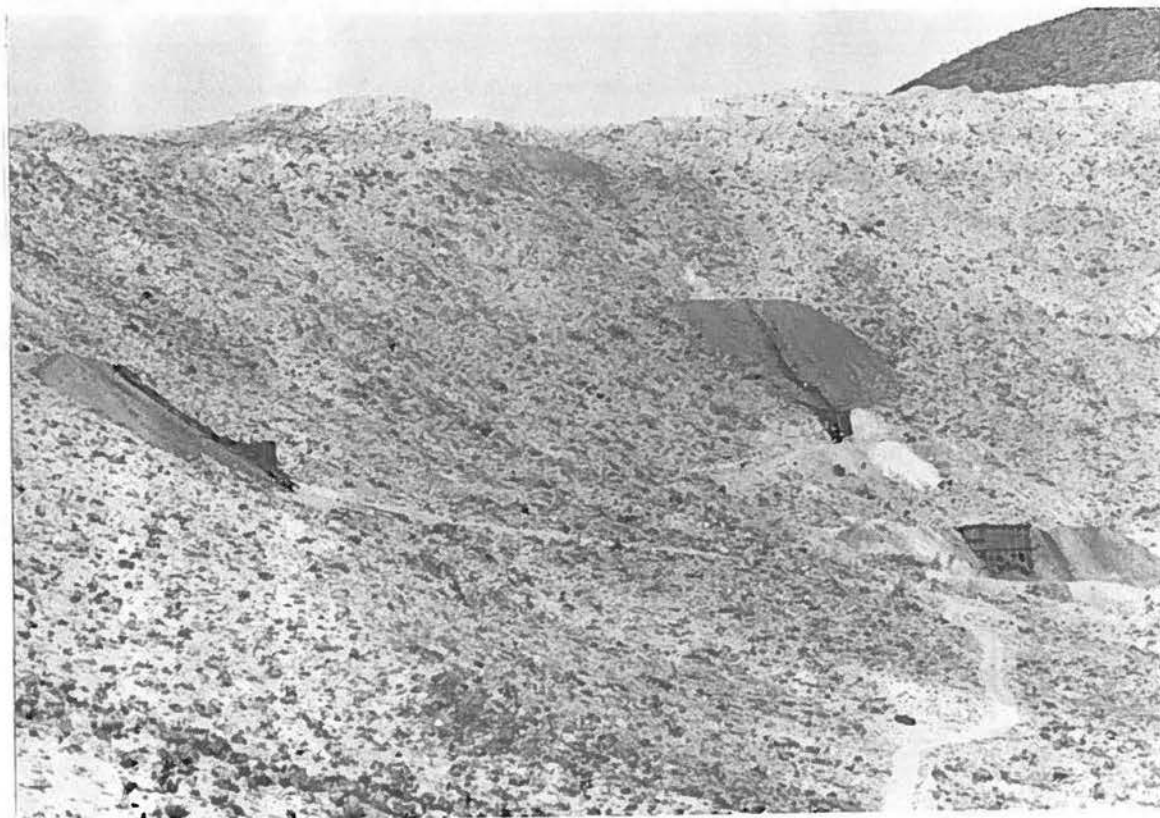


SILVER-COPPER-LEAD-ZINC MINES



Copper World mine

Map No. 85



Mohawk mine

Map No. 96

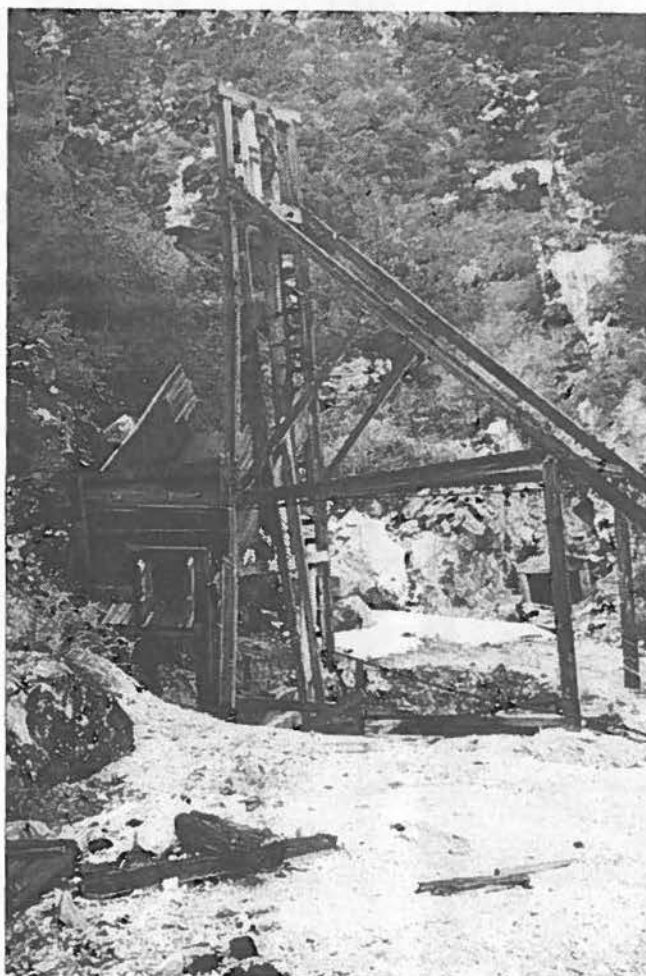


COPPER-LEAD-IRON MINES



Vulcan mine (iron)

Map No. 529



Sagamore mine  
(copper-lead)

Map No. 300





TIN-TUNGSTEN MINES



Evening Star mine (tin)

Map No. 193



Standard No. 2 mine (tungsten)

Map No. 190

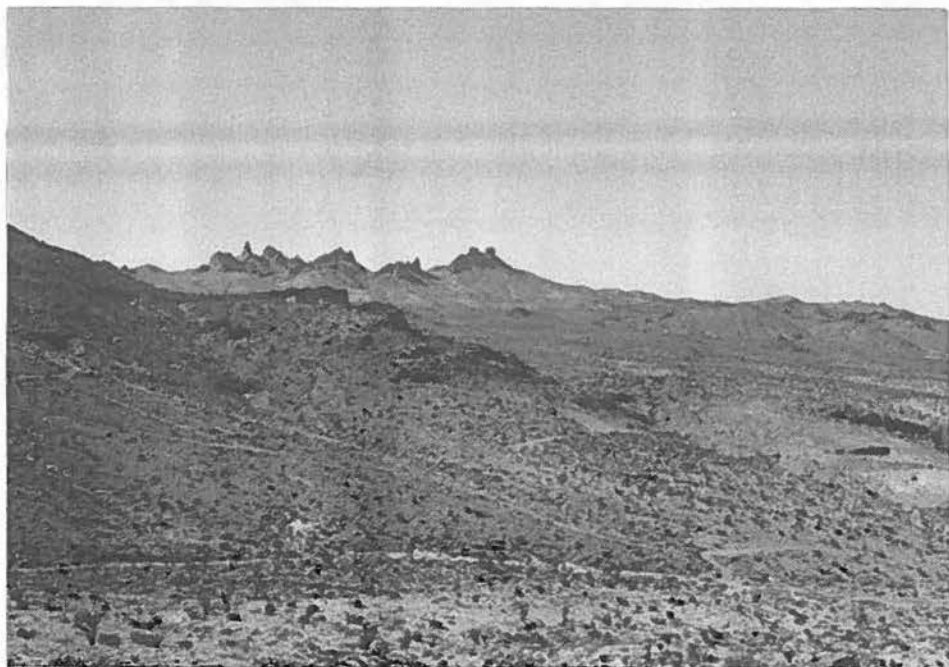


VOLCANIC CINDER--PERLITE MINES



Aiken mine (cinders)

Map No. 376



Erin/More-Lite mine (perlite)

Map No. 307





Benicite pit (calc)

MED No. 201



Mountain Pass mine  
(rare earth elements)

Outside Study





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Table 1. Mines and Prospects Index, East Mojave National Scenic Area,  
San Bernardino County, CA  
(Numerical order by map number)

1 Tuff 13	63 Bernardine Hills No. 3	120 Coin <del>Blind</del>
2 Lah Millsite	64 C-Marie	121 Telegraph
3 Mammoth mine	65 Monitor Millsite mine	122 Chester <del>Blind</del> Old Gold claims
4 KG No. 62	66 Jim-N-I mine	123 Yucca <del>Blind</del> group
5 QMO No. 23	67 Bidwell Millsite	124 Lost <del>Blind</del>
6 Valley View mine	68 CAL 112	125 Raw <del>Blind</del> prospect
7 Poco 19, 20 mine	69 Decorative stone	126 Holladay <del>Blind</del> prospect
8 LV 12	70 Conquistador No. 2 mine	127 Unknown
9 LV 15 mine	71 Keiper mine	128 Little <del>Blind</del> prospect
10 Lead 1&2	72 Wheelbarrow mine; Lime Canyon; East	129 Bronco <del>Blind</del>
11 Poco 13 mine	73 Vulture mine	130 Cinder <del>Blind</del>
12 Pitcairn mine	74 Pachalka South	131 Cima <del>Blind</del>
13 Ivanpah 1, 3 mine	75 Five-O mine	132 Unnamed <del>Blind</del>
14 Ivanpah 6 mine	76 Five-O Group	133 Tuff <del>Blind</del> group
15 Ivanpah 5 mine	77 Five-O Ext mine	134 New Harmony
16 Ivanpah 7 mine	78 Five-O Ext.	135 J. F. <del>Blind</del>
17 Snowstorm mine	79 Five-O Ext.	136 Gibson
18 LV 17 mine	80 D. G. H. Turk	137 Budget
19 Ivanpah 12, 13 mine	81 World mine	138 Lower <del>Blind</del>
20 Ivanpah 8 mine	82 Copper Commander mine; Copper Gint	139 Unknown <del>Blind</del>
21 Beatrice mine	83 Manilla mine	140 Unknown <del>Blind</del> (East Shaft)
22 Monitor mine	84 Dewey mine	141 Unknown <del>Blind</del> (West Shaft)
23 Lizzie Bullock mine	85 Copper World mine	142 Upper <del>Blind</del>
24 Lizzie Bullock No. 2 mine	86 Copper World Quartz No. 1 mine	143 Dobbs <del>Blind</del>
25 Alley mine	87 Copper World Quartz No. 2	144 Blue <del>Blind</del>
26 Ivanpah 15, 16 mine	88 World	145 Lead <del>Blind</del>
27 Taylor mine	89 White Rock/Five-O	146 Iron <del>Blind</del>
28 CAL 240 mine	90 White Rock Group mine	147 Defante <del>Blind</del> quarry
29 CAL 217	91 White Rock group	148 COGS <del>Blind</del>
30 Silver Hill 10, 11 mine	92 Five-O Group	149 Silver <del>Blind</del> Also Lucky Lode
31 CAL 207, 208 mine	93 Copper Gint mine	150 GMX <del>Blind</del>
32 Silver Horde mine	94 Mohawk Hill West	151 Zoltec
33 Pacific Fluorite mine	95 Wilshire mine	152 Piute <del>Blind</del>
34 CAL 180, 193, 194 mine	96 Mohawk mine	153 Unnamed <del>Blind</del>
35 Columbia Group mine	97 Wilshire Extension	154 Unnamed <del>Blind</del>
36 Green's mine	98 Alta mine	155 Weef <del>Blind</del>
37 Colosseum mine	99 Alta No. 2 mine	156 Esparan <del>Blind</del>
38 Cholla	100 Annex (Alta/Mohawk)	157 Mineral <del>Blind</del>
39 Mojave Tungsten mine	101 Stifersnite mine	158 Unnamed <del>Blind</del>
40 West-Par	102 Mohawk Mine Annex mine	159 Silverado <del>Blind</del> (North)
41 Tower group	103 Mohawk Mine Annex mine	160 White <del>Blind</del> (North)
42 Black Bird mine	104 Mohawk Mine Annex mine	161 Unnamed <del>Blind</del>
43 Whitfield Spring mine	105 Yucca Queen mine	162 Revenue <del>Blind</del> mine
44 Comet's Tail mine	106 Mohawk Mine Annex mine	163 New Trail <del>Blind</del>
45 Juniper Fluorite mine	107 Clark Mountain Station mine	164 Bullion <del>Blind</del>
46 Korfist mine	108 Mohawk Mine Annex Extension mine	165 White <del>Blind</del> (South)
47 KG 75, 76	109 Mohawk Mine Annex Extension mine	166 Georgia <del>Blind</del>
48 CAL 58, 61, 66 mine	110 Henry mine	167 Silverado <del>Blind</del>
49 Colosseum Gorge	111 Valley Wells Smelter	168 Unknown <del>Blind</del> (prospect)
50 Susan's Peak	112 Mercury/Saturn	169 Unknown <del>Blind</del> in quartzite
51 Blue Fire	113 Ace Millsite Group mine	170 Pozzo
52 Clark Mountain mine	114 Sand and Gravel Pit	171 Express <del>Blind</del>
53 Chico	115 Sand and Gravel Pit	172 Cima <del>Blind</del> deposit
54 Mojave Tungsten # 2 mine	116 Cadre Mine claims	173 Standard <del>Blind</del> mine
55 Benson mine; Tungsten Springs mine	117 Gold Bug (Fri. and Sat.) group	174 Levi No. 1
56 Tungsten Springs mine	118 Unnamed placer location	175 New Trail <del>Blind</del> site deposit
57 Tungsten Springs Ag mine	119 Trona Palm	176 Vega
58 Pearl mine		177 Allured <del>Blind</del> mine
59 Bell Spring mine		178 Morning <del>Blind</del>
60 Fay's Claim		
61 Franks Claim; also Clark Bullion		
62 Helen J. No. 5		

Table 1. Mines and Prospects Index, East Mojave National Scenic Area,  
San Bernardino County, CA  
(Numerical order by map number)--Cont.

179	Patrick Henry	242	Purple Bottle prospect	302	Unnamed
180	Sunnyside mine	243	Unknown inclined shaft	303	Unnamed
181	George Washington	244	Unknown prospect	304	Gold <del>England</del> claims
182	Buena Vista group	245	Monarch	305	White <del>Blue</del> limestone claim
183	Bessie	246	Gold/Red prospect	306	Unnamed
184	New Era No. 3 mine	247	Bonanza	307	Erin/ <del>Blue</del> mine
185	New Era No. 1 - 2 mine	248	Signal No. 1	308	Hats <del>prospect</del>
186	Ginn mine	249	Old Joe	309	Cedar <del>Top</del> site mine
187	Unnamed prospect	250	Mastodon	310	Searchlight
188	Unnamed prospect	251	Golden Treasure shaft	311	Hart <del>Peak</del> clay prospect
189	West End claim	252	Roman	312	Stray <del>Gas</del> Hill prospect
190	Standard No. 2 mine	253	Willow prospect	313	Stateline <del>prospect</del>
191	Geer dolomite quarry	254	West Mammoth	314	Quail <del>mine</del> prospect
192	Suzanne R. mine	255	Unnamed	315	White <del>Blue</del> clay prospect
193	Evening Star Tin mine	256	Unknown Copper prospect	316	Unknown <del>prospect</del>
194	Hartmann Tungsten mine	257	Unknown prospect	317	Unknown <del>prospect</del>
195	Copper King mine	258	Vanderbilt mines	318	White <del>Bar</del> 1
196	Lucky Find	259	Gold Bar mine	319	Turtle <del>Bar</del> clay prospect
197	Gold Button	260	Darling mine	320	Unknown <del>shaft</del>
198	Sunset	261	Gold Bronze mine	321	C-1 <del>clay</del> mine
199	MP	262	Coyote shaft	322	C and <del>W</del> clay mine
200	Betty Jane	263	Red Barnacle No. 56	323	Oro <del>Belle</del> mine
201	Unnamed prospect	264	Boomerang mine	324	Mountain <del>mine</del>
202	Kewanee mine	265	Unnamed	325	Hart <del>Quartz</del> site
203	Ivan group	266	Ivanpah Limestone deposit; Meevint	326	Jumbo <del>mine</del>
204	Carriage Wheel	267	Unnamed	327	Valley <del>mine</del>
205	Unnamed prospect	268	Ivanpah Wollastonite deposit	328	P. S. <del>mine</del>
206	Unnamed prospect	269	Unnamed	329	Castle <del>mine</del> gold deposit
207	Unnamed prospect	270	Red Chief	330	Green <del>mine</del>
208	Unnamed fluorite prospect	271	Gillsmith and Victory (?)	331	Ivanpah <del>quarry</del>
209	American Opportunity	272	Unnamed	332	Huntington <del>site</del> clay deposit
210	Teutonia	273	Unnamed	333	Prema
211	Billy Boy mine	274	Unnamed	334	Rat <del>Hole</del> mine
212	Blue Crystal prospect	275	Unnamed	335	Soda <del>Lake</del>
213	McDermott fluorspar deposit	276	Unnamed	336	Unknown
214	Unnamed prospect	277	Unnamed	337	Unknown
215	Green Rock prospect	278	Unnamed	338	Anthony
216	Albermarle mine	279	Manvel prospect	339	El <del>Lobo</del> mine
217	Climax prospect	280	Opal prospect	340	Little <del>Shale</del> Mtn.
218	Unnamed fluorite prospect	281	Unnamed	341	Unnamed <del>prospect</del>
219	White Horse	282	Unnamed	342	Michele
220	Unnamed shaft	283	Trio mine	343	Unnamed <del>prospect</del>
221	Nipton	284	Unnamed	344	Mosaic <del>mine</del>
222	Helen prospect	285	Unnamed	345	Bernice
223	Sani Lani West	286	Unnamed	346	Unnamed <del>location</del>
224	San E Lani No. 2	287	Garvanza mine & other Cliff Canyon	347	Gyron
225	Lily mine	288	Sack Tone	348	Helen <del>site</del>
226	B. T. prospect	289	Tungsten King mine	349	Gold <del>Quartz</del> (Aero Trust)
227	San E Lani No. 1	290	Big Hunch mine	350	Sunrise
228	Unknown shaft	291	Dorr Tungsten mine	351	Lady <del>Link</del>
229	Unnamed	292	Bronze mine	352	I AM <del>No. 3</del>
230	Unknown prospect	293	Unnamed	353	Paymaster <del>mine</del>
231	Rex claims	294	Copper Queen mine	354	Pythias
232	Silver Don	295	Unnamed	355	La <del>Palma</del> gap
233	Big Thunder	296	Giant Ledge mine	356	Oro <del>Fino</del> mine
234	Germanite	297	Unnamed	357	Hoodoo
235	Unknown prospect	298	Pleuss-Staufer claim group	358	Black <del>Rock</del>
236	Unknown shaft	299	The Marble claim	359	Comet <del>(Mount/HGB)</del>
237	Eagle prospect	300	Sagamore mine	360	Black <del>Fox</del>
238	Unknown shaft	301	Sericite mine	361	Unnamed <del>prospect</del>

Table 1. Mines and Prospects Index, East Mojave National Scenic Area,  
San Bernardino County, CA  
(Numerical order by map number)--Cont.

362	Brannigan East	425	K&S mine	484	SS Nos. 17-19 prospect, north
363	Unnamed prospect	426	Barrett mine	485	SS Nos. 20-22, 27-29 mine, south (S
364	Sunset	427	Unnamed prospect	486	Hoot Owl prospect
365	Brannigan mine	428	Silver Lead Spring	487	Prospect
366	Sweet	429	Prospect	488	Prospect
367	Uraniacs	430	Chicken Water Spring	489	Triple 10 Nos. 1-3 prospect
368	Lucky	431	Razor Back	490	Prospect
369	Old Dad Mountain deposit	432	CJOP-14	491	Blue Jay No. 1 prospect
370	Big Horn	433	Apex	492	Decorative stone quarry
371	Golden M	434	Mexican Spring I	493	Doodle Bug-Wildcat-Wild Horse placer
372	Unknown (Indian Creek)	435	Tramway	494	Prospect
373	MHGB claim group	436	Mexican Spring II	495	Prospect
374	Rainy Day	437	Spica	496	Prospect
375	Mesquite	438	Peso Plata No. 1	497	Globe mine
376	Aiken Cinder mine	439	Silver Buddy	498	Prospect
377	Orion group	440	Prospect	499	Prospect
378	Mourning Dove	441	White Rock prospect	500	Prospect
379	Russ	442	Red Silver prospect	501	Prospect
380	Green Acres	443	Prospect	502	Frisco No. 1 prospect
381	Ace	444	Prospect	503	SS No. 7 prospect
382	Jackpot	445	Regulus-Vega-Spica prospect (Silver	504	Prospect
383	Rainbow	446	Sadr prospect	505	Prospect
384	Unnamed prospect	447	Prospect	506	Prospect
385	Oro Y Plata	448	Prospect	507	Prospect
386	Barts Gold	449	Prospect	508	Prospect
387	South Padday	450	Denib mine	509	Okaw mine
388	Gold Standard	451	Prospect	510	Prospect
389	Cypress	452	Fremont-Easy Street prospect	511	Del No. 2 prospect, north extension
390	Marl	453	Prospect	512	Prospect
391	B.O.	454	Prospect	513	Del No. 2 prospect
392	Prospect	455	Silver Buddy mine	514	Prospect
393	Prospect	456	Silver Buddy Prospect, south	515	Firefly-White Eagle-Star
394	Kelgold 2-5	457	Castor-Pollux mine (Columbia mine)	516	SS No. 49 prospect
395	Kelgold 12	458	Prospect	517	Clamento No. 3 prospect
396	KEL 1-2	459	Francis mine	518	Prospect
397	Prospect	460	Prospect	519	Santa Anita-Beecher Canyon placer p
398	Kelgold 7-8	461	Prospect	520	Prospect
399	Kelgold 9-10	462	Blue Rock Nos. 1-6 mine (confidence)	521	Double H Nos. 1 and 2 mine
400	Limestone occurrence	463	Prospect	522	Frisco No. 3 mine
401	Specular	464	Prospect	523	Prospect
402	Prospect	465	Prospect	524	Orro Platta prospect
403	Prospect	466	Fanny No. 2 prospect	525	SS Nos. 51, 52, 60, and 61 prospect
404	Unnamed	467	Prospect	526	SS Nos. 63, 64 prospect
405	Unnamed	468	Monte Video prospect	527	Providence mine
406	Unnamed	469	Prospect	528	Prospect
407	Unnamed	470	Dixie No. 2 prospect	529	Prospect
408	Death Valley mine	471	Prospect	530	Prospect
409	Unnamed	472	Rex Nos. 1 and 2 prospect	531	Del No. 2 prospect, south extension
410	Unnamed	473	Prospect	532	Silver Queen I-XXXIII prospect
411	Unnamed	474	Prospect	533	Prospect
412	Big Quartz mine	475	SS No. 28 prospect, north	534	First Chance placer prospect
413	Unnamed	476	SS No. 29 prospect, north	535	Jo Je mine
414	Butcher Knife mine	477	Prospect	536	Prospect
415	Unnamed	478	Terry placer prospect		
416	Unnamed	479	SS No. 40 prospect		
417	Golden Quail mine	480	SS No. 38 prospect		
418	Shaft	481	SS No. 36 prospect		
419	Rico placer	482	SS No. 18 prospect, south		
420	Tesoro placer	483	SS No. 17 prospect, south		
421	Golden Sands placer				
422	Hoot Owl shaft				
423	Unknown				
424	Barnett mine; Beverly Glen, Hamerbac				



Table 1. Mines and Prospects Index, East Mojave National Scenic Area,  
San Bernardino County, CA  
(Numerical order by map number)--Cont.

537 Prospect	589 Scando	641 Sample
538 Green Scorpion prospect	590 Cominco	642 Unknown
539 Greek prospect	591 American Flag	643 Goldstone Group
540 Morning Star prospect	592 Rattlesnake mine	644 Crystal645Texas
541 Independence prospect	593 California	646 Center
542 Fan 1-5 prospect	594 Lord and Irish	647 Blue Danube
543 Prospect	595 Unknown	648 Pennsylvania
544 Good Hope mine	596 Leiser Ray	649 Unknown
545 Prospect	597 Peacock	650 Iron King651Crucero
546 Sunny Boy Extension	598 Old Boy	group
placer prospect	599 U. S. Arbor	652 Kelso Dunes
547 Red Rock prospect	600 Unknown (Berry claims)	653 Buena Suerte
548 Limestone outcrop	601 Unknown (Sol claims)	654 Unknown
549 Prospect	602 Gold occurrence	655 Comanche mine
550 Prospect	603 Gold Star North 1-44	656 Unnamed prospect
551 Prospect	prospect	657 Golden Legend
552 L'Chacana prospect	604 Raindrop prospect	659 Unknown
553 Prospect	605 BC prospect	659 Green Beauty
554 Pink Jack prospect	606 Grande 1-7 mine	660 Sunview
555 Prospect	607 Adams-Ikes Hope prospect	661 Virginia group
556 Prospect	608 Why Not Nos. 1-5 prospect	662 Edith group
557 Quartzite outcrop	609 Max Dor 1 and 2 mine	663 Philadelphia Fluorspar
558 Lopez No. 3 prospect	610 Gold Star 1-10 prospect	664 Midnight Group
559 Iris Fin prospect	611 Prospect	665 Lauri
560 Black Jack mine	612 Pink Falcon prospect	666 Hayman
561 Prospect	613 Prospect	667 Warm Springs Gold
562 Tough Nut mine	614 Prospect	668 Pilot mine
563 Prospect	615 Lou-Al-Mark Nos. 1-3	669 Providence Mine
564 Lopez No. 1 prospect	prospect	670 Unknown
565 Bonanza King mine	616 Silver Duchess prospect	671 Midas Touch
566 Dimension stone quarry	617 Prospect	672 Echo
567 Silver Queen-Golden	618 Cornfield Springs	673 Buena Vista mine
Horse placer	Consolidated mine	674 Valcerie group
568 Silver King mine	619 Lone Tree prospect	675 Big Horn mine
(Perseverance mine	620 Kelso Placer prospect	676 Unknown
569 Unnamed prospect	north	677 Wild Ass
570 Gold Valley mine	621 Rex mine	678 Santa Anna
571 Unnamed prospect	622 Kelso placer prospect,	679 Lady Luck
572 Unnamed prospect	south	680 Unknown
573 Lost Burro II	623 Dolomite outcrop	681 Gold Cross
574 Lost Burro	624 Bonanza 1-8 placer	682 Golden Gift (Coarse Gold)
575 Unknown (Von claims)	prospects	mine
576 Unknown (Hack claim	625 Iron Mountain prospect	683 Unknown
group)	626 Prospect	684 Wild Cat
577 Ben Hur(Lucky Penney	627 Rector Not prospect	685 Long Chance
claims)	628 Dolomite outcrop	686 Copper Charlie
578 Denver mine (Lucky Penney	629 Vulcan mine-Burro	687 Golden Nugget
claims)	prospect	688 Hidden Hill mine
579 Getchell Clay mine	630 Copper King-Queen of the	689 Unknown
580 Unknown (SOL claims)	Night pros	690 Silver Lode
581 Lucky Penney	631 Tip Top prospect	691 Iron Victory prospect
582 Unknown (Lucky Penney	632 Burro No. 31 prospect	692 Iron occurrence
claim group)	633 East Burro prospect	693 Unnamed prospect
583 King prospect	634 Burro 54 and 55 prospect	694 Lucky Bird No. 1 and 2
584 Unknown (Hack claim	635 Sunrise prospect	695 Harper
group)	636 Prospect	696 Unnamed occurrence
585 Unknown	637 Foshay Pass Barite	697 Pumice prospect
586 Maggies Dream	638 Due group	698 Dolomite Queen
587 Unknown (Rich claim	639 Petrified wood outcrop	699 Pumice occurrence
group)	640 Adams - Anna Ore	700 Unknown
588 True Blue		701 Fenner Hills Gold

Table 1. Mines and Prospects Index, East Mojave National Scenic Area,  
San Bernardino County, CA  
(Alphabetical order by name)

381 Ace	632 Burro No. 31 prospect	69 Decorative stone
113 Ace Millsite Group mine	414 Butcher Knife mine	492 Decorative stone quarry
640 Adams - Anna Ore	322 C and M clay mine	147 Defante Sandstone quarry
607 Adams-likes Hope prospect	321 C-1 clay mine	513 Del No. 2 prospect
376 Aiken Cinder mine	64 C-Marie	511 Del No. 2 prospect, north extension
216 Albermarle mine	68 CAL 112	531 Del No. 2 prospect, south extension
25 Alley mine	34 CAL 180, 193, 194 mine	450 Denib mine
177 Allured Copper mine	31 CAL 207, 208 mine	578 Denver mine (Lucky Penney claims)
99 Alta No. 2 mine	29 CAL 217	84 Dewey mine
98 Alta mine	28 CAL 240 mine	566 Dimension stone quarry
591 American Flag	48 CAL 58, 61, 66 mine	470 Dixie No. 2 prospect
209 American Opportunity	432 CJOP-14	143 Dobbs group
100 Annex (Alta/Mohawk)	148 COGS group	698 Dolomite Queen
338 Anthony	116 Cadre Mine claims	623 Dolomite outcrop
433 Apex	593 California	628 Dolomite outcrop
226 B. T. prospect	204 Carriage Wheel	493 Doodle Bug-Wildcat-Wild Horse placer
391 B.O.	329 Castle Mountains gold deposit	291 Dorr Tungsten mine
605 BC prospect	457 Castor-Pollux mine (Columbia mine)	521 Double H Nos. 1 and 2 mine
424 Barnett mine; Beverly Glen, Hamerbac	309 Cedar Top perlite mine	638 Due group
426 Barrett mine	646 Center	237 Eagle prospect
386 Barts Gold	122 Chesterfield & Old Gold claims	633 East Burro prospect
21 Beatrice mine	430 Chicken Water Spring	672 Echo
59 Bell Spring mine	53 Chico	662 Edith group
577 Ben Hur (Lucky Penney claims)	38 Cholla	339 El Lobo mine
55 Benson mine; Tungsten Springs mine	131 Cima Cinder mine	307 Erin/More-Lite mine
63 Bernardine Hills No. 3	172 Cima Limestone deposit	156 Esparanza group
345 Bernice	130 Cinder occurrences	193 Evening Star Tin mine
183 Bessie	517 Clamento No. 3 prospect	171 Express mine
200 Betty Jane	107 Clark Mountain Station mine	542 Fan 1-5 prospect
67 Bidwell Millsite	52 Clark Mountain mine	466 Fanny No. 2 prospect
370 Big Horn	217 Climax prospect	60 Fay's Claim
675 Big Horn mine	120 Coin Block	701 Fenner Hills Gold
290 Big Hunch mine	49 Colosseum Gorge	515 Firefly-White Eagle-Star placer prospect
412 Big Quartz mine	37 Colosseum mine	534 First Chance placer prospect
233 Big Thunder	35 Columbia Group mine	77 Five-O Ext mine
211 Billy Boy mine	655 Comanche mine	78 Five-O Ext.
42 Black Bird mine	359 Comet (Desert MHGB)	79 Five-O Ext.
360 Black Fox	44 Comet's Tail mine	76 Five-O Group
560 Black Jack mine	590 Cominco	92 Five-O Group
358 Black Rock	70 Conquistador No. 2 mine	75 Five-O mine
144 Blue Buzzard	686 Copper Charlie	637 Foshay Pass Barite
212 Blue Crystal prospect	82 Copper Commander mine; Copper Glint	459 Francis mine
647 Blue Danube	93 Copper Glint mine	61 Franks Claim; also Clark Bullion
51 Blue Fire	195 Copper King mine	452 Fremont-Easy Street prospect
491 Blue Jay No. 1 prospect	630 Copper King-Queen of the Night pros	502 Frisco No. 1 prospect
462 Blue Rock Nos. 1-6 mine (confidence)	294 Copper Queen mine	522 Frisco No. 3 mine
247 Bonanza	86 Copper World Quartz No. 1 mine	150 GMX group
624 Bonanza 1-8 placer prospects	87 Copper World Quartz No. 2	287 Garvanza mine & other Cliff Canyon
565 Bonanza King mine	85 Copper World mine	191 Geer dolomite quarry
264 Boomerang mine	618 Cornfield Springs Consolidated mine	181 George Washington
362 Brannigan East	262 Coyote shaft	166 Georgia Marble
365 Brannigan mine	651 Crucero group	234 Germanite
129 Bronco prospect	644 Crystal	579 Getchell Clay mine
292 Bronze mine	389 Cypress	296 Giant Ledge mine
137 Budget	80 D. G. H. Turk	136 Gibson
653 Buena Suerte	260 Darling mine	
182 Buena Vista group	408 Death Valley mine	
673 Buena Vista mine		
164 Bullion mine		
634 Burro 54 and 55 prospect		



Table 1. Mines and Prospects Index, East Mojave National Scenic Area,  
San Bernardino County, CA  
(Alphabetical order by name)--Cont.

271 Gillsmith and Victory (?)	203 Ivan group	615 Lou-Al-Mark Mos. 1-3 prospect
186 Ginn mine	13 Ivanpah 1, 3 mine	138 Lower Rathburn
259 Gold Bar mine	19 Ivanpah 12, 13 mine	368 Lucky
261 Gold Bronze mine	26 Ivanpah 15, 16 mine	694 Lucky Bird No. 1 and 2
117 Gold Bug (Fri. and Sat.) group	15 Ivanpah 5 mine	196 Lucky Find
197 Gold Button	14 Ivanpah 6 mine	581 Lucky Penny
497 Globe mine	16 Ivanpah 7 mine	373 MHGB claim group
681 Gold Cross	20 Ivanpah 8 mine	199 MP
349 Gold Cycle mine (Aero Trust)	266 Ivanpah Limestone deposit; Meevint	586 Maggies Dream
304 Gold Eagle claims	268 Ivanpah Wollastonite deposit	3 Mammoth mine
388 Gold Standard	331 Ivanpah quarry	83 Manilla mine
610 Gold Star 1-10 prospect	135 J. F. Morris	279 Marvel prospect
603 Gold Star North 1-44 prospect	382 Jackpot	390 Marl
570 Gold Valley mine	66 Jim-N-I mine	250 Mastodon
602 Gold occurrence	535 Jo Je mine	609 Max Dor 1 and 2 mine
246 Gold/Red prospect	326 Jumbo mine	213 McDermott Fluorspar deposit
682 Golden Gift (Coarse Gold) mine	45 Juniper Fluorite mine	112 Mercury/Saturn
657 Golden Legend	425 K&S mine	375 Mesquite
371 Golden M	396 KEL 1-2	434 Mexican Spring I
687 Golden Nugget	47 KG 75, 76	436 Mexican Spring II
417 Golden Quail mine	4 KG No. 62	342 Michele
421 Golden Sands placer	71 Keiper mine	671 Midas Touch
251 Golden Treasure shaft	395 Kelgold 12	664 Midnight Group
643 Goldstone Group	394 Kelgold 2-5	157 Mineral Springs
544 Good Hope mine	398 Kelgold 7-8	94 Mohawk Hill West
606 Grande 1-7 mine	399 Kelgold 9-10	108 Mohawk Mine Annex Extension mine
239 Graphite prospect	652 Kelso Dunes	109 Mohawk Mine Annex Extension mine
539 Greek prospect	620 Kelso Placer prospect, north	102 Mohawk Mine Annex mine
380 Green Acres	622 Kelso placer prospect, south	103 Mohawk Mine Annex mine
659 Green Beauty	202 Kewanee mine	104 Mohawk Mine Annex mine
330 Green Gold mine	583 King prospect	106 Mohawk Mine Annex mine
215 Green Rock prospect	46 Korfist mine	96 Mohawk mine
538 Green Scorpion prospect	552 L'Chacana prospect	54 Mojave Tungsten # 2 mine
36 Green's mine	8 LV 12	39 Mojave Tungsten mine
347 Gyron	9 LV 15 mine	245 Monarch
695 Harper	18 LV 17 mine	65 Monitor Millsite mine
325 Hart Consolidated	355 La Paloma group	22 Monitor mine
311 Hart Peak clay prospect	351 Lady Luck	468 Monte Video prospect
194 Hartmann Tungsten mine	679 Lady Luck	178 Morning Star mine
308 Hats prospect	2 Lah Millsite	540 Morning Star prospect
666 Hayman	665 Lauri	344 Mosaic Queen
62 Helen J. No. 5	10 Lead 1&2	324 Mountain Top mine
222 Helen prospect	145 Lead Lady	378 Mourning Dove
348 Helenbak	596 Leiser Ray	185 New Era No. 1 - 2 mine
110 Henry mine	174 Levi No. 1	184 New Era No. 3 mine
688 Hidden Hill mine	225 Lily mine	134 New Harmony
126 Holladay Gold prospect	400 Limestone occurrence	175 New Trail Magnesite deposit
357 Hoodoo	548 Limestone outcrop	163 New Trail mine
486 Hoot Owl prospect	340 Little Cowhole Mtn.	221 Nipton
422 Hoot Owl shaft	128 Little Dove prospect	509 Okaw mine
332 Huntington Tile clay deposit	24 Lizzie Bullock No. 2 mine	598 Old Boy
352 I AM No. 3	23 Lizzie Bullock mine	369 Old Dad Mountain deposit
541 Independence prospect	619 Lone Tree prospect	249 Old Joe
559 Iris Fin prospect	685 Long Chance	280 Opal prospect
146 Iron Horse	564 Lopez No. 1 prospect	377 Orion group
650 Iron King	558 Lopez No. 3 prospect	323 Oro Belle mine
625 Iron Mountain prospect	594 Lord and Irish	356 Oro Fino mine
691 Iron Victory prospect	574 Lost Burro	385 Oro Y Plata
692 Iron occurrence	573 Lost Burro II	524 Orro Platta prospect
	124 Lost Lead	

Table 1. Mines and Prospects Index, East Mojave National Scenic Area,  
San Bernardino County, CA  
(Alphabetical order by name)--Cont.

328	P. S. Hart mine	510	Prospect	479	SS No. 40 prospect
74	Pachalka South	512	Prospect	516	SS No. 49 prospect
33	Pacific Fluorite mine	514	Prospect	503	SS No. 7 prospect
179	Patrick Henry	518	Prospect	484	SS Nos. 17-19 prospect, north
353	Paymaster mine	520	Prospect	485	SS Nos. 20-22, 27-29 mine, south
597	Peacock	523	Prospect	525	SS Nos. 51, 52, 60 and 61 prospect
58	Pearl mine	528	Prospect	526	SS Nos. 63, 64 prospect
648	Pennsylvania	529	Prospect	288	Sack Tone
438	Peso Plata No. 1	530	Prospect	446	Sadr prospect
639	Petrified wood outcrop	533	Prospect	300	Sagamore mine
663	Philadelphia Fluorspar	536	Prospect	641	Sample
668	Pilot mine	537	Prospect	227	San E Lani No. 1
612	Pink Falcon prospect	543	Prospect	224	San E Lani No. 2
554	Pink Jack prospect	545	Prospect	114	Sand and Gravel Pit
12	Pitcairn mine	549	Prospect	115	Sand and Gravel Pit
152	Piute mine	550	Prospect	223	Sani Lani West
298	Pleuss-Staufer claim group	551	Prospect	519	Santa Anita-Beecher Canyon placer
11	Poco 13 mine	553	Prospect	678	Santa Anna
7	Poco 19, 20 mine	555	Prospect	589	Scando
170	Pozzo	556	Prospect	310	Searchlight
333	Preema	561	Prospect	301	Sericite mine
392	Prospect	563	Prospect	418	Shaft
393	Prospect	611	Prospect	248	Signal No. 1
397	Prospect	613	Prospect	439	Silver Buddy
402	Prospect	614	Prospect	456	Silver Buddy Prospect, south
403	Prospect	617	Prospect	455	Silver Buddy mine
429	Prospect	626	Prospect	232	Silver Don
440	Prospect	636	Prospect	616	Silver Duchess prospect
443	Prospect	669	Providence mine	30	Silver Hill 10, 11 mine
444	Prospect	527	Providence mine	32	Silver Horde mine
447	Prospect	699	Pumice occurrence	568	Silver King mine (Perseverance mine)
448	Prospect	697	Pumice prospect	428	Silver Lead Spring
449	Prospect	242	Purple Bottle prospect	690	Silver Lode
451	Prospect	354	Pythias	532	Silver Queen I-XXXIII prospect
453	Prospect	5	QMO No. 23	567	Silver Queen-Golden Horse placer
454	Prospect	314	Quail Mine prospect	149	Silver Star, Lucky Lode
458	Prospect	557	Quartzite outcrop	167	Silverado-Tungstite
460	Prospect	383	Rainbow	159	Silverado-Tungstite (North)
461	Prospect	604	Raindrop prospect	17	Snowstorm mine
463	Prospect	374	Rainy Day	335	Soda Lake
464	Prospect	334	Rat Hole mine	387	South Paddy
465	Prospect	592	Rattlesnake mine	401	Specular
467	Prospect	125	Raw Silver Cone prospect	437	Spica
469	Prospect	431	Razor Back	173	Standard No. 1 mine
471	Prospect	627	Rector Not prospect	190	Standard No. 2 mine
473	Prospect	263	Red Barnacle No. 56	313	Stateline prospect
474	Prospect	270	Red Chief	101	Stifersnite mine
477	Prospect	547	Red Rock prospect	312	Stray Cow Well prospect
487	Prospect	442	Red Silver prospect	240	Summit prospect
488	Prospect	445	Regulus-Vega-Spica prospect (Silver	546	Sunny Boy Extension placer prospect
490	Prospect	162	Revenue Copper mine	180	Sunnyside mine
494	Prospect	472	Rex Nos. 1 and 2 prospect	350	Sunrise
495	Prospect	231	Rex claims	635	Sunrise prospect
496	Prospect	621	Rex mine	198	Sunset
498	Prospect	419	Rico placer		
499	Prospect	252	Roman		
500	Prospect	379	Russ		
501	Prospect	483	SS No. 17 prospect, south		
504	Prospect	482	SS No. 18 prospect, south		
505	Prospect	475	SS No. 28 prospect, north		
506	Prospect	476	SS No. 29 prospect, north		
507	Prospect	481	SS No. 36 prospect		
508	Prospect	480	SS No. 38 prospect		

Table 1. Mines and Prospects Index, East Mojave National Scenic Area,  
San Bernardino County, CA  
(Alphabetical order by name)--Cont.

364 Sunset	256 Unknown Copper prospect	188 Unnamed prospect
660 Sunview	243 Unknown inclined shaft	201 Unnamed prospect
50 Susan's Peak	139 Unknown name	205 Unnamed prospect
192 Suzanne R. mine	140 Unknown name (East Shaft)	206 Unnamed prospect
366 Sweet	141 Unknown name (West Shaft)	207 Unnamed prospect
27 Taylor mine	230 Unknown prospect	214 Unnamed prospect
121 Telegraph	235 Unknown prospect	341 Unnamed prospect
478 Terry placer prospect	244 Unknown prospect	343 Unnamed prospect
420 Tesoro placer	257 Unknown prospect	361 Unnamed prospect
210 Teutonia	316 Unknown prospect	363 Unnamed prospect
645 Texas	317 Unknown prospect	384 Unnamed prospect
299 The Marble claim	228 Unknown shaft	427 Unnamed prospect
631 Tip Top prospect	236 Unknown shaft	569 Unnamed prospect
562 Tough Nut mine	238 Unknown shaft	571 Unnamed prospect
41 Tower group	241 Unknown shaft	572 Unnamed prospect
435 Tramway	320 Unknown shaft	656 Unnamed prospect
283 Trio mine	229 Unnamed	693 Unnamed prospect
489 Triple 10 Nos. 1-3 prospect	255 Unnamed	220 Unnamed shaft
119 Trona Palm	265 Unnamed	142 Upper Radium
588 True Blue	267 Unnamed	367 Urania
1 Tuff 13	269 Unnamed	674 Valerite group
133 Tuff claim group	272 Unnamed	6 Valley View mine
289 Tungsten King mine	273 Unnamed	327 Valley View mine
57 Tungsten Springs Ag mine	274 Unnamed	111 Valley Mills Smelter
56 Tungsten Springs mine	275 Unnamed	258 Vanderbilt mines
319 Turtle Back clay prospect	276 Unnamed	176 Vega
599 U. S. Arbor	277 Unnamed	661 Virginia group
127 Unknown	278 Unnamed	629 Vulcan mine-Burro prospect
336 Unknown	281 Unnamed	73 Vulture mine
337 Unknown	282 Unnamed	667 Warm Springs Gold
423 Unknown	284 Unnamed	155 Weef River
585 Unknown	285 Unnamed	189 West End claim
595 Unknown	286 Unnamed	254 West Mammoth
642 Unknown	293 Unnamed	40 West-Par
649 Unknown	295 Unnamed	72 Wheelbarrow mine; Lime Canyon; East
654 Unknown	297 Unnamed	305 White Dome limestone claim
659 Unknown	302 Unnamed	160 White Eagle (north)
670 Unknown	303 Unnamed	165 White Eagle (south)
676 Unknown	306 Unnamed	318 White Hart No. 1
680 Unknown	404 Unnamed	219 White Horse
683 Unknown	405 Unnamed	90 White Rock Group mine
689 Unknown	406 Unnamed	91 White Rock group
700 Unknown	407 Unnamed	441 White Rock prospect
600 Unknown (Berry claims)	409 Unnamed	89 White Rock Five-0
576 Unknown (Hack claim group)	410 Unnamed	315 White Rock clay prospect
584 Unknown (Hack claim group)	411 Unnamed	43 Whitfield Spring mine
372 Unknown (Indian Creek)	413 Unnamed	608 Why Not Nos. 1-5 prospect
582 Unknown (Lucky Penney claim group)	415 Unnamed	677 Wild Ass
587 Unknown (Rich claim group)	416 Unnamed	684 Wild Cat
580 Unknown (SOL claims)	208 Unnamed fluorite prospect	253 Willow prospect
168 Unknown (Slate prospect)	218 Unnamed fluorite prospect	97 Wilshire Extension
601 Unknown (Sol claims)	346 Unnamed location	95 Wilshire mine
575 Unknown (Von claims)	696 Unnamed occurrence	88 World
169 Unknown (prospect in quartzite)	118 Unnamed placer location	81 World mine
	132 Unnamed prospect	123 Yucca Palm group
	Unnamed prospect	105 Yucca Queen mine
	154 Unnamed prospect	151 Zoltec
	158 Unnamed prospect	
	161 Unnamed prospect	
	187 Unnamed prospect	

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA

Map no.	Name (Alternate name) Owner/operator	MILS number 1/ Location	Summary	Workings and production	Sample and resource data
1	Tuff 13 Shadow Valley Corporation	0060712855 T17N R12E sec.21	Gray-to-tan silt, sand, and pebbly gravel in alluvial fan is cut by shallow, dry creek beds. Probably overlies playa deposits. Light limonite staining locally; some caliche cementation.	Road cuts are the only workings in the study area. No production has occurred.	Two rock grab samples were taken, CMM-22-A and CMM-22-B, neither of which contained potentially economic concentrations of any element.
2	Lah Millsite Bond-Colosseum (Lac Minerals)	0060719027 T17N R12E sec.21	Alluvial fan accumulations mainly of limestone and dolostone sand, pebbles, and cobbles.	No workings were noted.	No samples were taken.
3	Mammoth mine (Flo; McCuen; Goodlight; Moonbeam)	0060712371 T17N R12E sec.14	The ore zone contains malachite, azurite, chrysocolla, auricalcite, and alunite (USBLM, 1980; Hewett, 1956). Radioactive (5,000 counts per second) material occurs. Limestone/dolomite and Johnnie Quartzite contact Precambrian schist and gneiss discordantly. Sheared mineralized zones to 10 ft thick are subparallel to schistosity but spread out along bedding and in crosscutting veins in carbonate and quartzite.	Four adits on at least two levels on east side of canyon, one short adit on west side, plus three more adits on west side; numerous pits and trenches, open stoping, gophering were used. A mill site to the west, including a jaw-crusher (?) foundation, was built in 1977 (?) by Boyd (?). 1916-1918: 100 tons containing 22%-25% copper. 1919-1929: 38 tons containing 16%-28% copper. (USBLM, 1980; Hewett, 1956)	A 3.0-ft-long chip sample, CMM-2-A, and five grab samples, CMM-2-B to CMM-2-F, were taken and contained a maximum of 309 ppb gold, 39 ppm silver, 1,570 ppm uranium, 89,300 ppm zinc, and more than 10,000 ppm each copper and lead. Sample CMM-2-B contained traces of palladium (4 ppb) and platinum (5 ppb). Sample CMM-2-F contained 9.33% copper, 7.59% zinc, 1.57% lead, and 0.13% fluorine. Resources are likely.
4	KG No. 62 (CAL Group)	0060712887 T17N R13E sec.05	Gray dolostone with cross-cutting, high-angle sheared zones probably overlying low-angle shears. Shear zones are mineralized by fluorite, sericite, clay, limonite, and copper carbonate.	Small dozer trench; no production.	One 0.5-ft-long chip sample, CMM-17-G, was taken and contained 8.94% fluorine.
5	QMO No. 23	0060712885 T17N R13E sec.05	Gray, fine-grained, vuggy dolostone.	A small pit with no production.	One chip sample was taken, CMM-17-E, and contained 380 ppm fluorine.
6	Valley View mine	0060712348 T17N R13E sec.05	Gray dolostone is sheared along low- and high-angle zones which are mineralized by fluorite, secondary copper minerals, limonite, sericite, and quartz.	Two adits, a large trench, and eight pits; undetermined production has occurred.	Six rock samples were taken, CMM-17-A to CMM-17-D, CMM-17-F, and CMM-17-H, and contained a maximum of 1,090 ppm antimony, 3,380 ppm arsenic, 1,890 ppm molybdenum, 346 ppm silver, 4,200 ppm tungsten, 11 ppm uranium, 1,400 ppm zinc, and more than 10,000 ppm each copper and lead. Maximum fluorine content was 6.26% and average was 4.325%.

1/ A unique, identifying number assigned to every mineral location within the U.S. Bureau of Mines Mineral Industry Location System (MILS) computerized database system.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
7	Poco 19, 20 mine (CAL Group)	0060712909 T17N R13E sec.05	Gray, fractured dolostone with intensely sheared, limonitic, silicified zones containing limonite and copper carbonates.	An adit, four shafts, and pits and trenches; undetermined past production has occurred.	Four rock grab samples were taken, CMM-16-A to CMM-16-C and CMM-16-E, and contained a maximum of 333 ppb gold, 113 ppm molybdenum, 1,360 ppm silver, 12 ppm uranium, 170 ppm fluorine, 2,400 ppm lead, and more than 10,000 ppm copper.
8	LV 12	0060712894 T17N R13E sec.04	Gray, massive, fractured, brecciated dolostone with light limonite staining and local silicification.	Drill holes and dozer trenches; no production.	Two rock grab samples were taken, CMM-16-H and CMM-16-I, and contained a maximum of 24 ppb gold, 14 ppm silver, and 230 ppm lead. Concentrates from an alluvial sample, CMM-16-41P, contained 15 ppb gold, 674 ppm cerium, and 298 ppm lanthanum.
9	LV 15 mine	0060712908 T17N R13E sec.04	Gray, fractured dolostone with silicified, limonitic, zones containing black minerals and copper carbonates.	Four adits with stopes, a shaft, and a pit; undetermined past production has occurred.	Two rock grab samples were taken, CMM-16-F and CMM-16-G, and contained a maximum of 238 ppb gold and 835 ppm silver.
10	Lead 1&2 (Poco Group, CAL Grp; KG Group) Joe Pauley; Sidney Hodges	0060712863 T17N R13E sec.07	Alluvial fan accumulations of dolostone, granitic rocks, and quartzite. Some caliche cementation; minor limonite.	Small pits and trenches; no production.	Two alluvial samples were taken, CMM-17-I and CMM-17-J, but contained no economic concentrations of any element. Sample CMM-17-I contained an estimated 0.00019 (?) oz/yd <sup>3</sup> gold, worth about \$0.07 oz/yd <sup>3</sup> at a gold price of \$380/oz.
11	Poco 13 mine (CAL Group; War Eagle No. 1)	0060712353 T17N R13E sec.08	Gray dolostone with sheared zone trending N. 40° W. and dipping 80° NE.; slickensides dip at 35°. Zone is about 3.3 ft wide and extends at least 250 ft. Mineralization consists of fluorite, sericite, clay and minor limonite and copper carbonates.	At least three adits and a pit. Small, undetermined production probably occurred.	One grab sample was taken, CMM-16-R, and contained 213 ppm antimony, 190 ppm arsenic, 1,060 ppm rubidium, 7 ppm silver, 18 ppm tungsten, and 7,100 ppm fluorine.
12	Pitcairn mine (#59785;)	0060712762 T17N R13E sec.08	Sheared, brecciated zones in gray limestone or dolostone are silicified, with drusy quartz in vugs. The mineralized zones contain limonite, fluorite, adularia, sericite, copper carbonates, and chrysocolla.	An adit, three shafts, and at least three pits or trenches; undetermined past production has occurred.	Four rock grab samples were taken, CMM-16-S to CMM-16-V and contained a maximum of 7,740 ppm antimony, 2,140 ppm arsenic, 614 ppm silver, 211 ppm tungsten, and more than 10,000 ppm copper.
13	Ivanpah 1, 3 mine (Old Ivanpah; Douglass No. 2)	0060710017 T17N R13E sec.08	Gray dolostone with sheared, brecciated zones mineralized by fluorite, clay, drusy quartz, and copper carbonates and silicates.	An adit, two shafts, and a small pit. Undetermined, small past production probably occurred here.	Two rock grab samples were taken, CMM-16-27 and CMM-16-28, and contained a maximum of 9,770 ppm antimony, 4,560 ppm arsenic, 1,370 ppm silver, and more than 10,000 ppm each copper and lead.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
14	Ivanpah 6 mine	0060712916 T17N R13E sec.08	Gray dolostone with slight brecciation, calcite veinlets, and copper oxide stains. Coarse, angular colluvium and alluvium accumulations lie along the bottom and sides of the drainages.	Short inclined shaft and trenches and pits, particularly in colluvium and alluvium; production, if any, is unknown.	Three samples were taken. CMM-16-32, a rock grab and alluvial concentrates, CMM-16-33 and CMM-16-34. CMM-16-32 contained 13 ppb gold, 19 ppm silver, and 19,000 ppm zinc. The alluvial concentrates contained a maximum of 17 ppb gold, 144 ppm antimony and 94 ppm silver.
15	Ivanpah 5 mine	0060712915 T17N R13E sec.08	Gray dolostone with fractured, sheared, brecciated high-angle zones containing chalcedony, vuggy silica, limonite, calcite, and copper carbonate staining.	Three shafts and several pits and trenches; small, undetermined past production has occurred.	Four rock grab samples were taken. CMM-16-W to CMM-16-Y and CMM-16-40 and contained a maximum of 65 ppb gold, 936 ppm silver, 62 ppm tungsten, 21.4 ppm uranium, 3,200 ppm zinc, and more than 10,000 ppm each copper and lead.
16	Ivanpah 7 mine	0060712917 T17N R13E sec.09	Gray dolostone with high-angle, sheared, fractured zones mineralized by calcite, limonite, and copper oxides.	At least three adits, two shafts, and a small pit. Undetermined past production has occurred.	Two rock grab samples were taken, CMM-16-2 and CMM-16-35, and contained a maximum of 455 ppb gold and 1,620 ppm silver (average 1,420 ppm).
17	Snowstorm mine (Alley Patent Survey Lot 39)	0060712858 T17N R13E sec.09	Fractured gray dolostone with mineralized high- and low-angle sheared, brecciated zones. Minerals include quartz (some chalcedonic), limonite, fluorite, copper carbonates, and sericite.	At least four adits, several shafts, and numerous pits and trenches. Production has occurred, with ore averaging 300 oz/ton silver in the 1880's (USBLM, 1980; Crossman, 1890).	Five rock grab samples were taken, CMM-16-D, CMM-16-J, CMM-16-M to CMM-16-O, and a 3.3-ft-long chip, CMM-16-P, and contained as much as 190 ppb gold, 83 ppm molybdenum, 1,390 ppm rubidium, 922 ppm silver, 224 ppm tungsten, 18,900 ppm zinc, and 3.1% fluorine.
18	LV 17 mine	0060712893 T17N R13E sec.09	Dark gray to black dolostone with low- and high-angle sheared brecciated zones mineralized by fluorite, limonite, copper carbonates, and manganese oxides.	At least two adits and several pits and trenches; undetermined past production has occurred.	Two rock grab samples were taken, CNN-16-41 and CMM-16-42, and contained as much as 11,500 ppm antimony, 5,460 ppm arsenic, 65 ppm molybdenum, 1,700 ppm silver, 1,940 ppm tungsten, and 2.76% fluorine, and more than 10,000 ppm each copper and lead.
19	Ivanpah 12, 13 mine	0060712896 T17N R13E sec.09	Gray dolostone with several sheared, brecciated, limonitic, quartz-veined (?), copper carbonate stained high- and low-angle sheared zones.	At least six adits and pits and trenches. Small, undetermined past production has occurred.	Four rock grab samples were taken, CMM-14-A, CMM-14-Q, CMM-16-45, and CMM-16-46, and contained as much as 316 ppb gold, 1,170 ppm silver, 1,460 ppm tungsten, 3,700 ppm zinc, 6,800 ppm copper, and 1650 ppm lead.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
20	Ivanpah 8 mine	0060712918 T17N R13E sec.08	Gray dolostone, fractured and brecciated locally, with high-angle sheared zones. Mineralization in sheared and brecciated rock includes quartz, limonite, and copper carbonates.	The Ivanpah 8 claim extends north-south across the northwest trending Beatrice-Monitor patented claims. At least one adit and three shafts, from which undetermined production has occurred, lie on the Ivanpah 8 claim.	Three rock grab samples were taken, CMM-16-Q, CMM-16-29, and CMM-16-52, and a 1.0-ft-long chip, CMM-16-39, and contained as much as 46 ppb gold, 1,060 ppm silver, 4,000 ppm copper, 2,300 ppm lead, and 1,500 ppm zinc.
21	Beatrice mine (Monitor; Stonewall Jackson)	0060712355 T17N R13E sec.08	Gray fractured dolostone with sheared brecciated zones containing silica, minor limonite, and minor copper carbonates. Vanadium minerals have been reported (USBLM, 1980; Hewett, 1956; U.S. Mineral Survey B-17).	Numerous adits, shafts, pits, and trenches. Past production has occurred. 1870-1880: Bullion worth \$3.5 million produced (USBLM, 1980; Hewett, 1956).	Two rock grab samples were taken, CMM-16-30 and CMM-16-31, and contained as much as 130 ppb gold, 763 ppm silver, and 3,850 ppm copper.
22	Monitor mine (Beatrice; Bullock; Stonewall) Lester H. Jacobs	0060712354 T17N R13E sec.09	Gray and yellow fractured dolostone with sheared, brecciated zones containing vuggy silica and stained by limonite and copper carbonates. Zones are mainly steeper than 45 and cross-cut the dolostone.	Numerous adits, shafts, pits, and trenches. Unpublished past production has occurred (USBLM confidential production files).	No sample data.
23	Lizzie Bullock mine (Stonewall Mine; Jackson; Stonewall Jackson)	0060712356 T17N R13E sec.09	Gray and yellow dolostone with sheared, brecciated zones stained by limonite and copper carbonates; vuggy quartz.	Several adits, shafts, and pits and trenches were the source of undetermined past production.	Four rock grab samples were taken, CMM-16-44, CMM-16-49, CMM-16-50, and CMM-16-51, and contained as much as 20 ppb gold and 120 ppm silver.
24	Lizzie Bullock No. 2 mine (Survey Lot No. 40) Marvin A. Melville	0060712862 T17N R13E sec.09	Gray dolostone with breccia zones cemented and stained by limonite and hematite. Breccia zones may have resulted from collapse of solution cavities such as caverns.	Several pits and trenches. Adits shown on topographic map probably were the source of undetermined past production.	One sample was taken, a rock grab, CMM-14-44, and contained 30.7 ppm antimony, 72 ppm arsenic, 7 ppm silver, and 44 ppm tungsten.
25	Alley mine (Survey Lot 38) Marvin A. Melville	0060712357 T17N R13E sec.09	Gray fractured dolostone with limonite, vuggy quartz (some chalcedonic), and traces of copper carbonates along shear zones and in irregular stockworks or breccia zones. Stromeyerite (CuAgS) has also been reported (USBLM, 1980; Hewett, 1956).	At least nine adits, several shafts, and numerous pits and trenches. Past production from the Alley and Lizzie Bullock area includes: 1890: 300-4,400 oz/ton silver. 1946: 37 tons with 0.37 oz/ton gold, 101 oz/ton silver, and 0.6% copper (USBLM 1980; Hewett, 1956).	Five rock grab samples were taken, CMM-14-28, CMM-14-29, CMM-14-30, CMM-14-35, and CMM-14-36, and contained as much as 31 ppb gold (average 16 ppb), 86 ppm silver (average 27 ppm).
26	Ivanpah 15, 16 mine	0060712895 T17N R13E sec.09	Gray dolostone with breccia zones, locally sheared, cemented by quartz, calcite and feldspar; includes limonite and copper carbonate staining. Nearby quartzite has black shale and pebble conglomerate.	At least four adits and pits and trenches; undetermined past production has occurred.	A rock grab sample, CMM-14-V, and a 1.0-ft-long chip, CMM-14-W, were taken, and contained as much as 100 ppb gold, 1,140 ppm silver, and 2,700 ppm copper.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
27	Taylor mine (CAL Group)	0060711104 T17N R13E sec.09	Gray dolostone with numerous high-angle sheared brecciated zones mineralized by vuggy quartz, calcite (includes travertine), minor limonite, minor copper carbonates, minor copper silicates, and minor silver halides.	At least thirteen adits, two shafts, and numerous pits and trenches; undetermined past production has been large.	Twelve rock grab samples were taken, CMM-14-L, CMM-14-M, CMM-14-S to CMM-14-U, CMM-14-Y, CMM-14-Z, CMM-14-27, and CMM-14-31 to CMM-14-34 and contained as much as 150 ppb gold, 4,270 ppm antimony, 3,080 ppm silver (average 326 ppm), 7,600 ppm copper, and 1,470 ppm lead.
28	CAL 240 mine	0060712876 T17N R13E sec.08	Gray dolostone with sheared breccia zone 1-2 ft wide striking N. 55° W. and dipping 65° NE. Mineralization of zone includes limonite-hematite (?), clay, minor secondary copper minerals, and calcite.	Two adits and one inclined shaft. May have had minor production.	Two rock samples were taken, CMM-16-K and CMM-16-L, and contained as much as 946 ppb gold, 486 ppm silver (average 400 ppm), 1,800 ppm zinc, 1,300 ppm lead, and more than 10,000 ppm copper. Concentrates of an alluvial sample, CMM-16-QP, contained 110 ppb gold.
29	CAL 217	0060712897 T17N R13E sec.17	Pale gray massive dolostone with copper carbonate and limonite staining of chalcedony cemented breccia.	Small pits and trenches; no production.	One sample, a rock grab, CMM-14-K, was taken, and contained 208 ppb gold, 298 ppm silver, and 5,700 ppm copper.
30	Silver Hill 10, 11 mine (CAL 221, 222)	0060712892 T17N R13E sec.09	Gray dolostone with sheared, brecciated zones which are locally silicified, vuggy, and lightly to heavily stained by limonite, black oxides, and copper carbonates.	At least eight adits, a shaft, and several pits and trenches. Small, undetermined past production has occurred.	Five rock grab samples were taken, CMM-14-D, CMM-14-E, CMM-14-41, CMM-14-42, and CMM-14-43, and contained at least 1,330 ppm antimony, 610 ppm arsenic, 178 ppm molybdenum, 930 ppm silver, (average 341 ppm), 4,100 ppm copper, and 4,800 ppm lead.
31	CAL 207, 208 mine (Kiwaizer Ruins (Informal name))	0060712898 T17N R13E sec.09	Gray dolostone with several sheared fracture mineralized zones. Mineralized zones contain calcite, quartz, clay, and minor limonite.	At least two shafts and several pits and trenches. An undetermined, probably small, amount of past production occurred. Silver coins were minted here (Prince Smith, 1990, verbal communication).	Three rock grab samples were taken, CMM-14-N to CMM-14-P, and contained as much as 561 ppb gold, and 362 ppm silver.
32	Silver Horde mine	0060712763 T17N R13E sec.16	Gray limestone or dolostone with sheared, brecciated, silicified, calcitic zones. The mineralized zones contain abundant chalcedony silica.	Workings, from which minor production probably occurred, consist of at least three adits, two shafts, and four pits or trenches.	Eight rock samples were taken, CMM-14-B, CMM-14-C, and CMM-14-G to CMM-14-J, CMM-14-R, and CMM-15-A, and contained as much as 190 ppb gold, 380 ppm cadmium, 354 ppm silver, 14,500 ppm zinc, and 5,500 ppm lead. Concentrates from an alluvial sample, CMM-14-F, contained 110 ppb gold.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
33	Pacific Fluorite mine (War Eagle No. 2)	0060710425 T17N R13E sec.16	Fluorite has concentrated in zones at least 6 ft thick along low-angle, north-striking, west-dipping thrust faults. Copper and antimony minerals and fluorite also occur along high-angle shear zones. Quartz, sericite, limonite, and, locally, stibnite occur in mineralized zones.	At least four adits, seven shafts, and six pits. Foundations of a mill remain, and two reservoirs. Past production has been recorded but not published (USBM confidential production files).	Eleven samples were taken, CMM-10-T to CMM-10-Z, CMM-10-27, CMM-10-28, CMM-10-41, and CMM-10-42, all rock grab samples, except for CMM-10-Y, a 3.3-ft-long chip, and contained as much as 122,000 ppm antimony, 367 ppm molybdenum, 1,210 ppm rubidium, 592 ppm silver, 190 ppm tungsten, and 56,300 ppm zinc. Samples CMM-10-X, CMM-10-Y, and CMM-10-27, respectively, contained 3.68%, 3.94%, and 5.26% fluorine. Sample CMM-10-Z contained 3.07% copper and 26.1% lead. Significant resources exist.
34	CAL 180, 193, 194 mine (Curtis Peak (Informal))	0060712889 T17N R13E sec.09	Fractured limestone and quartzite with mineralized sheared and brecciated zones. Mineralized zones include vuggy quartz (some chalcedonic), limonite, and copper carbonates.	An adit and small pits and trenches and dozer roads; production from stopes in the adit has been small.	Five rock grab samples were taken, CMM-10-39, CMM-10-40, CMM-10-45, CMM-10-48, and CMM-10-49, and contained as much as 100 ppb gold, 5,260 ppm antimony, 2,110 ppm arsenic, 120,000 ppm barium, 722 ppm silver, and 850 ppm tungsten.
35	Columbia Group mine (Colombia Group; CAL Group)	0060710356 T17N R13E sec.15	Precambrian schist and gneiss with north to northwest trending faults. Quartz veins and rhyolite near contacts of schist and granite contain scheelite and wolframite (USBLM, 1980). Not visited in 1990 because of mining overhead from Colosseum mine.	A shaft and at least three pits. Undetermined past production has occurred.	No samples were taken.
36	Green's mine (Bartlett VI; CAL Group)	0060712926 T17N R13E sec.10	Precambrian schist and gneiss with sheared, brecciated zones. Some accompanied by pegmatite and diorite dikes. Mineralization includes limonite, chlorite, quartz, malachite, azurite, galena (?), and tetrahedrite (?).	At least seven adits and several pits; small-scale production occurred. 1926-1927: 42 tons of ore contained 1.09 oz of gold, 174 oz of silver, 74 lb of copper, and 24,038 lb of lead (USBLM, 1980; Goodwin, 1957; Hewett, 1956).	Five samples were taken, CMM-10-43, CMM-10-44, CMM-10-47, CMM-10-50, and CMM-10-51, and a 20-ft-long chip, CMM-10-46, and contained as much as 1,290 ppb gold (average 289.5 ppb), 1,540 ppm antimony, 250 ppm rubidium, and 383 ppm silver. Concentrates from an alluvial sample, CMM-14-X, contained 416 ppb gold, 1,200 ppm cerium, and 172 ppm thorium. Gold flakes, estimated to weigh about 0.00011 oz/yd <sup>3</sup> in this sample would be worth \$0.04/yd <sup>3</sup> at a gold price of \$300/oz.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
37	Colosseum mine Bond-Colosseum (Lac Minerals)	0060710082 T17N R13E sec.10	Breccia pipe in rhyolite plug is mineralized (USBLM, 1980; Tucker and Sampson, 1943; Hewett, 1956). Two felsitic, rhyolitic breccia pipes, linked by a narrow neck contain free gold in the micron size range and gold in pyrite. Chalcopyrite, chalcocite, galena, and sphalerite are other common sulfides occurring as replacement breccia and fracture fillings and disseminations.	1929-1939: 3,016 tons with 624.42 oz gold, 155 oz silver, 285 lb copper, and 488 lb lead (USBLM, 1980; Tucker and Sampson, 1943; Hewett, 1956). In 1987, about 25,000 short tons/day were being mined and ore fed to a carbon-in-pulp mill with a capacity of 3,400 tons/day. Production costs were estimated at \$200/ton (Argall, 1987). In 1989, about 26,000 short tons/day were being mined from two open pit mines and ore fed to a carbon-in-pulp plant designed to treat 3,400 tons/day, or 1.2 million tons/year. Average stripping ratio is 4.0 to 1. About 70,000 oz of gold and 30,000 oz of silver are being produced per year; active mine life is estimated to be nine years (Attaway, 1989, p. 371). In February, 1990, about seven years of mine life were projected at a production of 70,000 oz/year of gold and a gold price of \$400/oz. (Dave McClure, Colosseum mine geologist, personal communication, 1990).	In 1989, initial ore reserves were estimated at 10.5 million tons containing an average of 0.062 oz/ton gold (Attaway, 1989, p. 371). In February, 1990, about seven years of mine life were projected at a production rate of 70,000 oz/year of gold and a gold price of \$400/oz. (Dave McClure, Colosseum mine geologist, personal communication, 1990).
38	Cholla (CAL Group)	0060712873 T17N R13E sec.15	Precambrian schist and gneiss with northerly to northwesterly trending faults cropping out. Not visited because of mining at Colosseum mine.	Small pits and trenches; production, if any, unknown.	No samples taken.
39	Mojave Tungsten mine (Douglass No.1; CAL; Serendipity)	0060710370 T17N R13E sec.15	Precambrian schist and gneiss with northerly to northwesterly trending faults cropping out. Not visited except for fringes because of mining at Colosseum mine and mill-tailings pond; a shallow shaft with masses of fenitized pegmatite containing pegmatite, fluorite, and sericite were found.	A shaft with extensive drifting and small pits and trenches. Past production has occurred from wolframite-bearing quartz veins, 64,000 lb of 60% WO <sub>3</sub> concentrates in 1915 and 1916 (USBLM, 1980; Hewett, 1956).	One rock grab sample was taken, CMM-10-30, and contained 12 ppb gold, 3,400 ppm barium, 310 ppm cerium, 27.4 ppm thorium, and 2,220 ppm fluorine.
40	West-Par (Tiger, Zebra)	0060712764 T17N R13E sec.03	Precambrian schist and gneiss with dikes and sills of basalt, diabase, and granitic pegmatite.	Shallow pits, trenches, and dozer roads; no production.	Four rock grab samples were taken, CMM-18-B to CMM-18-E, and contained as much as 16 ppb gold, 11.1 ppm antimony, 13 ppm arsenic, 5 ppm silver, 7 ppm tungsten, and 790 ppm zinc.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
41	Tower group (Tiger, Zebra, Contact) Jean Clary and Robert Ansara	0060712856 T17N R13E sec.02	Precambrian schist and gneiss with dikes and sills of basalt, diorite, and pegmatite. Shearing and brecciation are abundant. The rocks are heavily stained locally by limonite. Float wolframite occurred.	Workings include a shaft and drift, not visited. Small trenches and pits were examined in the study area.	Four rock grab samples were taken, CMM-18-A and CMM-21-B to CMM-21-D, and contained as much as 2.8 ppm antimony, 3 ppm arsenic, 920 ppm barium, 300 ppm chromium, 220 ppm rubidium, and 25.2 ppm thorium. Concentrates from an alluvial sample, CMM-21-A, contained 8 ppb gold.
42	Black Bird mine (Cal, Kim, Joy, Vaughn)	0060712647 T17N R13E sec.12	Biotite schist, amphibolite, granitic rocks, basalt intrusive, and lenses of pegmatite. Pegmatites are simple, mainly quartz, feldspar, and mica (biotite and muscovite). Some mica books are 3 in. thick and 1 ft across; most mica is wavy and contorted, but some is high quality.	One short adit and at least 19 pits and trenches from which a small, undetermined amount of mica, quartz, and feldspar were produced.	Five samples were taken, CMM-13-A to CMM-13-E, all rock grab samples, except for CMM-13-B, a 1.5-ft-long chip, and contained as much as 714 ppb gold (average 156 ppb), and 61.6 ppm thorium.
43	Whitfield Spring mine (CAL Group)	0060712851 T17N R13E sec.14	Precambrian schist and gneiss with argillized, sericitic, slightly silicified, lightly limonitic, sheared, fractured zone. The zone contains minor dolomite and manganese calcite and is about 3 ft thick with N. 10° E. strike and dip 40°-55° NW.	Four inclined shafts and stopes; past production has been small.	Two samples were taken, a rock grab, CMM-12-E, and a 3.4-ft-long chip, CMM-12-F, and contained as much as 366 ppb gold, 150 ppm antimony, and 822 ppm tungsten.
44	Comet's Tail mine (Here-To-Stay; Birney; Cal; Blackbird)	0060712646 T17N R13E sec.13	Narrow, lenticular quartz veins in biotite schist, granitic gneiss, and pegmatite. Chalcopryrite, galena, fluorite, and fibrous sericite have been reported (USBLM, 1980; Hewett, 1956).	A shaft about 10 ft deep, two pits, and at least 18 trenches from which small, undetermined production has occurred.	Four rock grab samples were taken, CMM-12-A to CMM-12-D, and contained as much as 1,280 ppm antimony, 909 ppm arsenic, 184,000 ppm barium, 32 ppm molybdenum, 265 ppm silver, and 7,170 ppm tungsten.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
45	Juniper Fluorite mine (KG Group; CAL Group; Unknown name)	0060712927 T17N R13E sec.21	Sheared, brecciated zones in carbonates are 6 ft or more thick and contain massive, purple and green fluorite. The zones are along high- and low-angle structures. The zones are partly silicified, sericitic, limonite stained, and contain minor copper carbonates.	At least three shafts, two adits, and nine pits or trenches; unpublished past production has occurred (USBM confidential production files).	Six samples were taken, CMM-10-J to CMM-10-N and CMM-10-38, all rock grab samples except CMM-10-D, a 6.5-ft-long chip, and contained as much as 100 ppb gold, 142 ppm molybdenum, 770 ppm rubidium, 310 ppm silver (average 83 ppm), 1,220 ppm tungsten (average 409 ppm), and 35,400 ppm zinc. Sample CMM-10-M contained 1.53% copper, 7.63% lead, and 3.68% fluorine. Samples CMM-10-J, CMM-10-L, and CMM-10-N, respectively contained 3.21%, 4.00%, and 2.37% fluorine. Significant fluorite resources exist. An estimated 300,000 tons contain 20%-30% fluorite, 3% copper, and 10 oz/ton silver (Prince Smith, 1889, verbal communication).
46	Korfist mine (Juniper; Almaden; Crusade; KG)	0060711367 T17N R13E sec.22	Carbonates above schist and gneiss. Low-angle and high-angle faults are sericitized, silicified, and locally contain fluorite, chlorite, talc, phlogopite, and copper minerals.	At least four shafts, five pits, and numerous trenches with significant although unknown past production.	Five rock grab samples were taken, CMM-10-33 to CMM-10-37, and contained as much as 3 ppb gold, 2,340 ppm antimony, 1,940 ppm arsenic, 848 ppm molybdenum, 1,280 ppm rubidium, 1,200 ppm silver (average 313 ppm), 9,500 ppm copper, 2,800 ppm lead, and 4.94% fluorine.
47	KG 75, 76 (Unknown M; CAL Group; Almaden)	0060712651 T17N R13E sec.22	Schist and gneiss with sheared, brecciated zones, partly silicified; all limonitic with black staining. Wolframite along silicified shear zones.	A small pit and drill pad; no past production.	Four samples were taken, CMM-10-H, CMM-10-I, CMM-10-31, and CMM-10-32, all rock grab samples, except CMM-10-31, a 2-ft-long chip, and contained as much as 75.4 ppm antimony, 73 ppm arsenic, 2,960 ppm tungsten (average 782 ppm), and 460 ppm fluorine.
48	CAL 58, 61, 66 mine (Green's Gold)	0060710122 T17N R13E sec.15	Sheared, limonitic, quartz-veined zones in schist and gneiss.	A shaft and two pits; undetermined production.	Three rock grab samples were taken, CMM-10-D, CMM-10-E, and CMM-10-29, and contained as much as 19 ppb gold, 854 ppm antimony, 82 ppm arsenic, 554 ppm cerium, 219 ppm lanthanum, 220 ppm rubidium, 11 ppm silver, 217 ppm tungsten, and 360 ppm fluorine.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
49	Colosseum Gorge (Glitter Gorge; Cal Group)	0060712650 T17N R13E sec.15	Schist and gneiss near carbonate contact mineralized along northwest-trending, near-vertical, sheared, silicified, limonitic, sericitized quartz and carbonate zone.	At least two shafts and four pits or trenches but no apparent production.	Four rock samples were taken, CMM-10-0 to CMM-10-Q and CMM-10-S, all grab samples, except for CMM-10-0, an 11-ft-long chip, and contained as much as 61 ppb gold, 10 ppm silver, and 18 ppm tungsten. Concentrates from an alluvial sample, CMM-10-R, contained 7 ppb gold, 387 ppm lanthanum, 159 ppm thorium, and 12 ppm uranium.
50	Susan's Peak	0060712649 T17N R13E sec.23	Sheared, brecciated, silicified, limonitic zone in schist and gneiss.	Two adits (one caved) and a pit; no production has occurred.	One rock grab sample was taken, CMM-8-V, and contained 19 ppb gold, 57,500 ppm barium, and 90 ppm tungsten.
51	Blue Fire	0060712877 T17N R13E sec.28	Limestone/dolostone beds constitute the summit ridges of Clark Mountain; caves in the carbonates are numerous and some contain guano accumulations (Prince Smith, personal communication, 1990).	Small pits and caves. Not visited due to snow.	No samples.
52	Clark Mountain mine	0060712367 T17N R13E sec.27	Breccia in limestone of Bird Spring Formation contains hydrozincite pods (USBLM, 1980; Hewett, 1956).	Production from numerous pits, trenches, adits, and shafts occurred, but was not published (USBLM, 1980; Hewett, 1956; USBM confidential production records).	Three rock grab samples were taken, CMM-9-A, CMM-9-B, and CMM-9-C, and contained an average of 247 ppb gold and 149 ppm silver. Sample CMM-9-B contained 6 ppb palladium.
53	Chico (Clark Mountain Mine)	0060712874 T17N R13E sec.27	Sheared, brecciated gray dolostone is heavily limonite stained near Precambrian schist and gneiss.	A short inclined shaft from which no production has occurred.	One rock grab sample was taken, CMM-9-D, and contained 140 ppb gold, 128 ppm molybdenum, and 23 ppm uranium.
54	Mojave Tungsten # 2 mine (Colorado Vista mine; CAL Group)	0060712360 T17N R13E sec.22	Sheared, brecciated, sericitized, silicified, limonitic, black-stained schist and gneiss along zone about 5 ft (?) thick striking N. 80° E. and dipping 70° SE.	At least one shaft and five small pits; small past production has occurred.	Two rock grab samples were taken, CMM-10-F and CMM-10-G, and contained as much as 20 ppb gold, 11 ppm silver, and 857 ppm tungsten.
55	Benson mine; Tungsten Springs mine (Colorado Vista mine)	0060711103 T17N R13E sec.23	Granodiorite (?) is mineralized, especially along sheared, brecciated zones where limonite, clay, and vuggy, chalcidonic silica are common. Intrusive basalt and diorite occur in dikes and sills, some tens of feet thick.	Adits, shafts, pits, and trenches are the workings; unknown production of tungsten has been moderate.	Five rock samples were taken, CMM-8-A, CMM-8-B, CMM-8-C, CMM-8-W, and CMM-8-X, and contained as most 17 ppb gold, 26 ppm silver, 988 ppm tungsten, and 20 ppm uranium. Average tungsten content was 401 ppm.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
56	Tungsten Springs mine  Tungsten Springs Mining Comp.	0060712361 T17N R13E sec.23	Sheared, brecciated, limonitic, sericitic, argillic, silicified wolframite-bearing zones in schist, and gneiss with associated basalt, diorite, and pegmatite dikes and sills.	Shafts, adits, and dozer trenches; past production of at least 500 tons of high-grade tungsten ore has occurred. Production of 5 to 10 tons/month of $WO_3$ concentrates is planned (Bruce Moore, 1990, written communication).	Three rock grab samples were taken at the mine, CMM-8-N, CMM-8-O, and CMM-8-Y, and contained at most 13 ppb gold and 14 ppm tungsten. Concentrates (CMM-8-2A) at the mill contained 18.36% iron, 0.37% manganese oxide, 0.86% calcium oxide, and 61% tungsten trioxide.
57	Tungsten Springs silver mine (Tungsten Springs mine) Tungsten Springs Mining Co.	0060712362 T17N R13E sec.23	Sheared, brecciated, limonitic, silicified, wolframite-bearing zones in schist and gneiss. Intrusive basalt, diorite, and granitic pegmatite occur in the vicinity.	Two deep shafts and dozer trenches; undetermined past production has occurred.	Two samples were taken, CMM-8-T and CMM-8-U, both rock grabs, and contained at most 16 ppb gold and 338 ppm tungsten.
58	Pearl mine	0060712365 T17N R13E sec.26	Granodiorite, limonitic, argillic, and silicified, crops out. Locally sheared, brecciated zones are more intensely mineralized.	At least three trenches, an adit, a shaft, and a pit have been the source of undetermined past production.	Three rock grab samples were taken, CMM-8-E, CMM-8-F, and CMM-8-G, and contained at most 87 ppb gold, 5 ppm silver, and 698 ppm tungsten.
59	Bell Spring mine (Pearl)	0060712648 T17N R13E sec.26	Sheared, brecciated, silicified, limonitic zones in schist and gneiss.	A shaft and pit from which small, undetermined production occurred.	Five samples were taken, CMM-8-I to CMM-8-L, and contained at most 20 ppb gold, 3,060 ppm thorium, 2,820 ppm tungsten, and 20 ppm uranium. Concentrates from an alluvial sample, CMM-8-M, contained 5 ppb gold.
60	Fay's Claim (Clark Bullion)	0060712363 T17N R13E sec.25	Sheared, jointed, limonitic schist and gneiss with pegmatite lenses.	Dozer trenches; no production.	A rock sample was taken, CMM-8-P, and contained 7 ppm silver. An alluvial sample (CMM-8-D) contained an estimated 0.00025 oz/yard <sup>3</sup> gold, worth about \$0.095/yard <sup>3</sup> at a gold price of \$380/oz.
61	Franks Claim; also Clark Bullion (Pearl; Tungsten Spring)	0060712364 T17N R13E sec.25	Sheared, limonitic, argillized, silicified granodiorite crops out; pink-granite pegmatite, biotite schist, diorite, and gneiss occur nearby.	Workings include four adits; production has not occurred or has been small.	Two rock grab samples were taken, CMM-8-H and CMM-8-Q, and contained as much as 9 ppm silver and 14 ppm tungsten.
62	Helen J. No. 5	0060712910 T17N R13E sec.25	Major fault zone at least 100 ft wide in schist, gneiss, and pegmatites. Zone is vertical, strikes N. 70° W., and is intensely argillized and silicified, with vuggy chalcadonic quartz. Crosscutting quartz veins are numerous in the zone.	Two pits; no production.	One rock grab sample was taken, CMM-8-S, but contained no elements in economic amounts.
63	Bernardine Hills No. 3	0060712911 T17N R13E sec.25	Precambrian schist and gneiss with pegmatite dikes and limonitic, argillic, silicic, barite-rich, fluorite-bearing vertical dike trending N. 55° W.	Small pits and trenches but no production.	One a 2.0-ft-long chip sample was taken, CMM-8-R, and contained 107,000 ppm barium, 770 ppm chromium, 180 ppm lanthanum, 25.1 ppm samarium, and 1,220 ppm fluorine.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
64	C-Marie (Ivanpah Springs; Burro No. 5)	0060712875 T17N R13E sec.24	Precambrian schist and gneiss with pegmatite, basalt, and diorite dikes. Limonitic, silicified sheared breccia zones contain wolframite (?).	Small pits, trenches, and dozer roads but no production.	Three rock grab samples were taken, CMM-23-F, CMM-23-N, and CMM-23-O, and contained as much as 241 ppb gold, 210 ppm tin, and 1,600 ppm zinc.
65	Monitor Millsite mine  Lester H. Jacobs	0060712860 T17N R13E sec.24	Precambrian schist and gneiss with argillized, sericitic, silicified zones.	A deep shaft, two adits (source of present day Ivanpah Springs), and pits, trenches, and old mill building foundations and tailings. Past production aside from mill operation probably occurred.	No samples were taken.
66	Jim-N-I mine (Ivanpah Springs mine)	0060712864 T17N R13E sec.24	Sheared, limonitic, silicified, vuggy, sulfide-bearing, copper carbonate stained sheared breccia zones in Precambrian schist and gneiss.	Small pits, small trenches, dozer roads, short adits, and two deep shafts. Undetermined past production occurred.	Seven rock samples were taken, CMM-23-C to CMM-23-E, CMM-23-I, CMM-23-J, CMM-23-L, and CMM-23-M, all grab samples, except for CMM-23-I, a 13-ft-long chip, and contained as much as 99 ppb gold, 2,800 ppm antimony, 1,040 ppm arsenic, 133,000 ppm barium, 210 ppm rubidium, 582 ppm silver (average 211 ppm), and 4,600 ppm copper.
67	Bidwell Millsite  Marvin A. Melville	0060712878 T17N R13E sec.24	Precambrian schist and gneiss with limonitic, sericitic, silicified zones, mainly obscured by alluvium.	Areas of old building foundations, pits, and trenches. No production.	No samples taken.
68	CAL 112 (Ivanpah Water Tank)	0060712865 T17N R13E sec.24	Precambrian schist and gneiss with limonitic, silicified, sheared contact between garnet-bearing pegmatitic quartz monzonite (?) and biotite-rich amphibolite.	A small trench; no production.	Two rock grab samples were taken, CMM-23-A and CMM-23-B, and contained no economically interesting concentrations of any elements. Concentrates from an alluvial sample, CMM-23-G, contained 6 ppm silver, 898 ppm cerium, 176 ppm uranium, and 66 ppm tungsten.
69	Decorative stone	0060712859 T17N T12E sec.35	Gray to nearly white schistose to gneissose dolomitic rock, poorly exposed in area of extensive alluvial fan accumulations.	One small pit; no production.	None



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
70	Conquistador No. 2 mine (Keiper (??)) Jean B. Clary/Robert L. Ansara	0060712370 T17N R12E sec.36	Pre-Cambrian schist and gneiss crop out in the vicinity; thin dikes or sills intrude sediments or are included as fault slices. Carrara Formation siltstone, quartzite, and dolostone and Zabriskie Formation quartzite occur. The sediments trend N. 10° E. and dip 45° NW. but are folded and may be part of an anticline, perhaps overturned. A quartz vein, at least 400 ft long and 2 ft thick, is subparallel to the bedding. Calcite, dolomite (?), white feldspar, and barite(?) occur with the quartz vein, which may extend for several thousand ft as a discontinuous, lenticular, gash-vein system, possibly part of a saddle-reef structure (Jean Clary and Robert Ansara, 1990, verbal communication).	Two inclined shafts, three adits, and at least 27 trenches and pits have been dug along the crest of the vein. A third adit is being driven in from the east at creek level to intercept the projection of the vein at depth. Four or more old arrastres at the site indicate that the site was mined on a small scale, probably in the late 1880's. Free-milling gold occurs.	Three rock samples were taken, CMM-3-A to CMM-3-C, all grab samples except for CMM-3-C, a 2.4-ft-long chip, and contained as much as 21,300 ppb gold, and 11 ppm silver. Concentrates from two alluvial samples, CMM-3-D and CMM-3-E, contained as much as 110 ppb gold and 23.7 ppm thorium. Gold flakes representing 0.00056 and 0.0123 oz/yd <sup>3</sup> was weighed in the two alluvial samples, worth about \$0.21 and \$4.67/yd <sup>3</sup> at a gold price of \$380/oz.
71	Keiper mine (Lime Canyon mine; Valentine)	0060712369 T17N R13E sec.30	Granodiorite (?) overlain by carbonates occurs. Mineralization is in silicified, sheared, high-angle brecciated zones in the granodiorite. The mineralized zones are vuggy, limonitic, stained by copper minerals, and contain galena. One zone, about 6 ft thick, strikes N. 45° E. and dips 65° NW.	Workings include three or more adits, a shaft, and a pit. Undetermined production has occurred. Dumps and workings were snow-covered during the examination.	One rock grab sample was taken. CMM-7-A contained 6,650 ppb gold, 71 ppm silver, 1,900 ppm zinc, 3,150 ppm copper, and more than 10,000 ppm lead.
72	Wheelbarrow mine (Lime Canyon; Eastside; No Name; Fraction; Pactolus)	0060710260 T17N R12.5E sec.25	Mineralization is galena and sphalerite in sheared, brecciated carbonate zones 2 to 6 ft thick trending north to N. 10° W. with dips of about 55° SW. Zone continues south to Pachalka Spring area.	Workings include five adits, an inclined shaft, and at least two pits. Underground mining was by room and pillar, stull support, and open stoping. Undetermined past production occurred.	Four rock grab samples were taken, CMM-4-A to CMM-4-D, and contained as much as 33 ppb gold and 91 ppm silver. CMM-4-C contained 7.9% lead and 11.4% zinc.
73	Vulture mine (Emperor mine)	0060710057 T17N R12.5E sec.36	Limestone and dolostone, probably of Nopah, Bonanza King, and Carrara formations, contact along low-angle faults (Joseph, 1985). Mineralization was influenced by low-angle faults. The zone continues north to the Wheelbarrow. At the inclined shaft, a sheared, brecciated carbonate trends N. 35°-60° W. and dips 20°-35° NE. Pachalka Spring flows at 65°F. Traces of unidentified iridescent oily film stained the surface of stagnant water.	Workings include two shafts near the spring, probably for water wells, two adits, two pits, and an inclined shaft. Production occurred. 1915-1919: minor gold, 2.04 oz/ton silver, 3.6% copper, 1.45% lead, and 0.71% zinc (USBLM, 1980; Goodwin, 1957; Eric, 1948).	Two chip samples were taken, CMM-5-C and CMM-5-D, respectively 2.3- and 5.0-ft-long, and contained as much as 11 ppb gold, 64,600 ppm zinc, and 1.97% lead.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
74	Pachalka South (Five-O; Pactolus)	0060712886 T17N R12.5E sec.36	Carrara Formation shaly limestone with poorly exposed, sheared, brecciated, vuggy quartz veins.	Dozer trenches; no production.	One rock grab sample was taken, CMM-11-39, and contained no economically interesting concentrations of any element.
75	Five-O mine (West Peak Tactite) Joe Flores	0060712866 T17N R12.5E sec.1	Tactites in dolostone occur at or near contacts with granitic rocks and green porphyritic dikes. The tactites are sheared and brecciated, limonitic, and stained by copper carbonates. Epidote, quartz, muscovite, zoisite, actinolite, garnet, serpentinite, and asbestos also occur in or near the tactites.	A trench, at least four pits, and an adit. A small amount of past production has occurred.	Three rock grab samples were taken, CMM-11-41 to CMM-11-43, and contained as much as 99 ppb gold, 9 ppm silver, 150 ppm tin, 27 ppm tungsten, and 970 ppm zinc.
76	Five-O Group (East Quartz Vein) Joe Flores	0060712868 T16N R13E sec.06	Quartz monzonite, fractured and silicified, has a poorly exposed lenticular quartz vein a few feet thick and a few tens of feet long. The quartz is white and massive with some vugs, limonitic patches, and a few percent pyrite cubes.	A small trench in a colluvium; no production.	Two rock grab samples were taken, CMM-11-36 and CMM-11-44 and contained as much as 3 ppb gold, 1,300 ppm barium, and 19 ppm thorium.
77	Five-O Ext mine (Serpentinite adits) Joe Flores	0060712888 T16N R13E sec.06	Gray to nearly white dolostone in contact with quartz monzonite; some cross-cutting mafic dikes. Mineralization is in sheared, brecciated, contorted tactite zones and includes limonite, copper carbonates, black oxides, serpentinite, chlorite, and muscovite.	Several adits, a shaft, and small pits and trenches; small past production has occurred.	Four rock grab samples were taken, CMM-11-J to CMM-11-L and CMM-11-37 and contained as much as 425 ppb gold, 3,300 ppm barium, 42 ppm molybdenum, 170 ppm silver, 263 ppm tungsten, 4,000 ppm zinc, and more than 10,000 ppm copper.
78	Five-O Ext. (South Adit, Sec 6) Joe Flores	0060712890 T16N R13E sec.06	Banded tan dolostone with contorted skarn pods; overall trend is N. 20° W. Skarns contain copper carbonates, limonite, green garnet, and fine-grained intrusive rock.	An adit and trench; unknown production, probably none.	One rock grab sample was taken, CMM-11-35, and contained 37 ppb gold, 9 ppm silver, 21 ppm tungsten, 1,300 ppm zinc, and more than 10,000 ppm copper.
79	Five-O Ext. (White Trench)	0060712891 T16N R13E sec.06	Gray to nearly white marble with low-angle fault with fracture zone and breccia striking N. 80° W. and dipping 15° SW. Silicification (?) along fractures.	Dozer trench; no production.	Two samples were taken, a 2-ft-long chip, CMM-11-F, and a rock grab, CMM-11-38, and contained as much as 2 ppb gold, 250 ppm zinc, and 330 ppm copper.
80	D. G. H. Turk	0060712869 T17N R13E sec.31	Lateral moraine of subrounded-to-subangular dolostone pebbles and cobbles with a sandy matrix.	Several small pits and trenches but no production.	Two alluvial samples were taken, CMM-25-A and CMM-25-B, but concentrates contained only as much as 7 ppb gold.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
81	World mine (North Adits)	0060712883 T16N R13E sec.06	Several sheared, contorted, brecciated, lenticular intersecting mineralized zones 3-12 ft wide in dolostone. Some mineralized zones are associated with quartz monzonite dikes, basalt dikes, or green porphyritic dikes, and some mineralized zones are near large masses of quartz monzonite. Mineralized zones contain limonite, copper carbonates, and black oxides.	Four adits, two shafts, and several small pits and trenches. Undetermined past production has occurred.	Four rock grab samples were taken, CMM-11-G, CMM-11-H, CMM-11-V, and CMM-11-W, and contained as much as 87 ppb gold, 6 ppm selenium, 14 ppm tellurium, 4,600 ppm zinc, and more than 10,000 ppm copper.
82	Copper Commander mine (Copper Gint; Spar King; Pactolus; World)	0060711262 T16N R13E sec.05	Gray limestone or dolostone with crosscutting and bedded or sheared, brecciated, gossany, limonitic tactite zones near granodiorite and intruded by granitic dikes. The tactite zones are intensely weathered, contain magnetite, garnet (andradite and grossularite), vesuvianite, clinopyroxene, epidote, serpentinite, chlorite, mica, black sulfides, limonite, selenite, calcite(?), azurite and malachite.	At least five adits, a shaft, and seven pits or trenches. Moderate but unknown production, mainly of copper, lead, and zinc has occurred.	Eight rock grab samples were taken, CMM-11-Q to CMM-11-U and CMM-11-27 to CMM-11-29, and contained as much as 277 ppb gold, 5,210 ppm antimony, 4,420 ppm arsenic, 240 ppm cobalt, 18 ppm europium, 49 ppm molybdenum, 11 ppm selenium, 654 ppm silver, 62 ppm tellurium, 288 ppm tungsten, 85,200 ppm zinc, and >10,000 ppm each copper and lead.
83	Manilla mine	0060712861 T16N R13E sec.05	Intensely sheared, brecciated contacts between dolostone, granodiorite, porphyry, and dioritic rocks are mineralized by pyrite, chalcopyrite, arsenopyrite, bornite, limonite, copper carbonates, serpentinite, actinolite, garnet, epidote, and chlorite. Similar mineralization exists along cross-cutting sheared breccia zones.	At least three adits, two shafts, and numerous pits and trenches; undetermined past production has occurred.	Four rock grab samples were taken, CMM-11-40 and CMM-11-45 to CMM-11-47, and contained as much as 287 ppb gold, 450 ppm rubidium, 22 ppm selenium, 460 ppm silver, 28 ppm tellurium, 84 ppm tungsten, 12,000 ppm zinc, and more than 10,000 ppm each copper and lead.
84	Dewey mine	0060712368 T16N R13E sec.05	Sheared, brecciated, contorted gossany tactite zones at contacts of dolostone, granodiorite, biotite gneiss, and porphyry and in cross-cutting zones. Pyrite, chalcopyrite, bornite, copper carbonates, limonite, black oxides, arsenopyrite, pyrrhotite(?), magnetite, muscovite (sericite), garnet, serpentinite, actinolite, epidote, and chlorite occur in the mineralized zones. Tin minerals have been reported (USBLM, 1980; Hewett, 1956).	At least three adits, a shaft, and pits and trenches; past production has occurred, with 330 tons of copper ore having been reportedly mined (USBLM, 1980; Hewett, 1956).	Four rock grab samples were taken, CMM-11-48 to CMM-11-51, and contained as much as 130 ppb gold, 15 ppm selenium, 82 ppm silver, 177 ppm tungsten, 64,300 ppm zinc, 1,700 ppm lead, and more than 10,000 ppm copper.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
85	Copper World mine (Copper World Quartz 1, 2) Dan Murphy Foundation	0060711269 T16N R13E sec.05	Heavy limonite gossan, black oxides, and copper carbonates at wide, intensely sheared and brecciated zone at contact of granodiorite and dolomite and in narrow cross-cutting zones. Main zone trends northwesterly and dips 30°-40° SW. and also contains mafic dikes, granitic dikes, garnet, serpentinite, epidote, and chlorite. Other minerals include magnetite, chalcopyrite, galena, sphalerite, pyrite, arsenopyrite, gold, silver, tenorite, hematite, hemimorphite, cerussite, hydrozincite, smithsonite, malachite, azurite, and chrysocolla (Ruff and Unruh, 1980, p. 310, in part after Evans, 1974).	Production occurred as early as 1869, but main production was between 1906 and 1908, between 1916 and 1918, and in the 1940's. Production amounted to 5,321,184 lb of copper (Hewett, 1956; USBLM, 1980), more than 1 million lb of lead (Goodwin, 1957), and 60,778 oz silver (Hewett, 1956). Open pits on about half of the claim expose entry to several thousand feet of old drifts, shafts, and stopes (Ruff and Unruh, 1980, p. 306). Production of gem and lapidary quality secondary copper minerals occurred in a cap of weathered rock on deeper secondary enriched zone and primary sulfides, and was worth \$600,000 in 1977 and 1978 (Ruff and Unruh, 1980, p. 307, 308, 312).	Four rock grab samples were taken, CMM-11-55 to CMM-11-58, and contained as much as 407 ppb gold, 1,400 ppm barium, 230 ppm cobalt, 310 ppm rubidium, 8 ppm selenium, 520 ppm silver, 8,700 ppm zinc, 620 ppm lead, and more than 10,000 ppm copper.
86	Copper World Quartz No. 1 mine (Copper World Mine) Dan Murphy Foundation	0060712872 T16N R13E sec.05	Sheared, brecciated, contorted zone in dolostone; the zone is about 15 ft wide, strikes N. 55° E., and dips 70° SE. Mineralization includes quartz, limonite, and copper carbonates. Also, tan, limonitic laminar dolostone contains disseminated mineralization.	Several shafts, trenches, and dozer cuts; unknown production occurred.	Three rock grab samples were taken, CMM-11-59 to CMM-11-61, and contained as much as 198 ppb gold, 2,690 ppm antimony, 1,440 ppm arsenic, 580 ppm barium, 210 ppm silver, 2,100 ppm zinc, 6,900 ppm copper, and 4,700 lead.
87	Copper World Quartz No. 2 (Copper World mine) Dan Murphy Foundation	0060712871 T16N R13E sec.05	Dolostone and granodiorite contact at west end of claim, although laminar bedded yellow to tan dolostone occurs over most of the east part of the claim.	An adit explores the contact of the dolostone and granodiorite; amount of production, if any, is not known.	Two rock grab samples were taken, CMM-11-52 and CMM-11-53, and contained as much as 10 ppb gold, 870 ppm barium, 330 ppm zinc, and 264 ppm copper.
88	World (East Adit)	0060712884 T16N R13E sec.05	Gray dolostone with intersecting, heavily limonitic shear zones with quartz stringers and black staining. Bedding strikes north and dips 20° E.; one 2- to 5-ft-wide shear zone strikes N. 10° W. and dips 85° SW.; the other, a 2.0-ft-wide shear zone, strikes N. 70° E. and dips 30° NE.	A short adit; no production.	One rock grab sample was taken, CMM-11-54, and contained 45 ppb gold, 46 ppm molybdenum, 54 ppm selenium, 28 ppm silver, 3,000 ppm zinc, 2,200 ppm copper, and more than 10,000 ppm lead. Concentrates from an alluvial sample, CMM-11-62, contained 20 ppb gold, 15 ppm tungsten, and 490 ppm zinc.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
89	White Rock/Five-0 (Slaughter Drill Site) Joe Flores	0060712854 T16N R12.5E sec.01	West-dipping thrust sheets of limestone/dolostone, schist, gneiss, granitic rocks with quartz veins and tactite pods. The quartz veins are lenticular and split and thin irregularly; sheared zones are locally silicified and 1-5 ft thick. The tactite pods are 20 ft or more thick and hundreds of feet long.	Pits and trenches but no production. Core drilling occurred about 30 years ago under the direction of "Dutch" Slaughter (Joe Flores, 1990, personal communication).	A 4.3-ft-long chip sample, CMM-11-B, and a rock grab, CMM-11-E, contained as much as 455 ppb gold, 2,100 ppm barium, 360 ppm rubidium, 22 ppm silver, 183 ppm tungsten, and 700 ppm zinc. Concentrates from an alluvial sample, CMM-11-34, contained 44 ppb gold.
90	White Rock Group mine (Lower Ridge Tactite) Joe Flores	0060712853 T16N R12.5E sec.01	Tactites in limestone or dolostone occur near or at a contact with granodiorite or quartz monzonite. The contact zone is sheared, brecciated, heavily limonitic, copper carbonate rich and magnetite bearing.	Trenches, pits, shafts, and adits; a small amount of past production has occurred.	Two rock grab samples were taken, CMM-11-C and CMM-11-D, and contained, respectively, 342 and 190 ppb gold, 12 and 92 ppm silver, and 52 and 295 ppm tungsten.
91	White Rock group (Big M) Joe Flores	0060712852 T16N R12.5E sec.01	Vuggy, limonite stained quartz vein about 3 ft thick in schist and gneiss is lenticular and discontinuous but may be traced about 1,500 ft.	Several pits and trenches; no past production.	A 2.5-ft-long chip sample was taken, CMM-11-A, and contained 7 ppb gold.
92	Five-0 Group (Black Sand Tunnel Site) Joe Flores	0060712867 T16N R12.5E sec.12	Quartz monzonite in sheared contact with gray dolomite. Sheared, brecciated tactites, magnetite-, limonite-, and copper-carbonate-rich, have been deposited at the contacts.	Small pits and trenches; no production.	Four rock samples were taken, CMM-11-30 to CMM-11-33, all grab except for CMM-11-31, and contained as much as 402 ppb gold, 1,100 ppm barium, 210 ppm rubidium, 11 ppm silver, 730 ppm tin, 280 ppm tungsten, 1,100 ppm zinc, 9,200 ppm copper, and 7 ppm lead.
93	Copper Glint mine (Copper Commander mine)	0060712766 T16N R13E sec.06	Gray carbonates with contorted sheared, brecciated mineralized zones subparallel to bedding. The mineralized zones are limonitic and silicified and contain oxidized copper.	At least three adits and a shaft. Past production probably was small; a mercury (?) retort and cone concentrators lay in ruins near the workings.	Three rock grab samples were taken, CMM-11-M to CMM-11-O, and a 1.0-ft-long chip, CMM-11-P, and contained as much as 130 ppb gold, 120 ppm silver, 24 ppm thorium, 69,000 ppm zinc, 237 ppm copper, and more than 10,000 ppm lead.
94	Mohawk Hill West	0060712902 T16N R13E sec.18	Gray dolostone with sheared, limonitic, gouge-rich zone.	An adit; no production	Two rock grab samples were taken, CMM-20-45 and CMM-20-46, and contained as much as 1,510 ppb gold, 36,300 ppm arsenic, 89 ppm silver, 7,000 ppm zinc, 1,580 ppm copper, and more than 10,000 ppm lead.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
95	Wilshire mine (Mohawk Mine) William Hubbard	0060712476 T16N R13E sec.07	Sheared, brecciated, silicified limonitic zones in dolostone; contains minor quartz and pyrite.	An adit, shaft, and numerous pits and trenches; past production has occurred and is tabulated in confidential USBM production files, both for the Wilshire claim and undesignated members of the Mohawk mine group.	Seven rock grab samples were taken, CMM-20-35, CMM-20-43, CMM-20-44, and CMM-20-47 to CMM-20-50, and contained as much as 1,380 ppb gold (average 405 ppb), 45,900 ppm arsenic, 531 ppm cadmium, 93 ppm silver (average 42 ppm), 50,400 ppm zinc (average 19,400 ppm), 7,000 ppm copper (average 2,960 ppm), and more than 10,000 ppm lead.
96	Mohawk mine William Hubbard	0060710264 T16N R13E sec.18	Limonite-stained dolostone and quartz monzonite from adit on shear zone trending N. 40° W. and dipping 80° SW.	At least one adit, one shaft, and pits and trenches; undetermined past production occurred.	Two rock grab samples were taken, CMM-20-37 and CMM-20-38, and contained as much as 6 ppb gold, 54 ppm arsenic, 600 ppm chromium, 17 ppm cobalt, 3 ppm silver, 310 ppm zinc, 145 ppm copper, and 800 ppm lead.
97	Wilshire Extension (Mohawk Hill SE 7; Pactolus) William Hubbard	0060712899 T16N R13E sec.07	Gray dolostone with sheared zone containing quartz, some chalcedonic, limonite, copper carbonates, manganese oxides, and galena(?).	Two adits and two pits; probably no past production.	Two rock grab samples were taken, CMM-20-34A and CMM-20-34B, and contained as much as 160 ppm antimony, 42,500 ppm arsenic, 624 ppm cadmium, 150 ppm silver, 26,900 ppm zinc, 3,450 ppm copper, and more than 10,000 ppm lead.
98	Alta mine William Hubbard	0060712881 T16N R13E sec.07	Sheared, brecciated, gossany, silicified, tactitic, limonitic, copper carbonate stained dolostone and quartz monzonite at and near contacts with quartz monzonite and green porphyritic dikes, and in cross-cutting zones. Associated quartz veins with limonitic vugs and copper carbonate staining.	At least two adits, a deep, inaccessible shaft, and numerous pits and trenches; past production of unknown amounts has occurred.	Six rock grab samples were taken, CMM-20-53 to CMM-20-58, and contained as much as 894 ppb gold (average 415 ppb), 23,300 ppm arsenic, 110 ppm cobalt, 460 ppm cadmium, 73 ppm molybdenum, 60 ppm nickel, 623 ppm silver (average 137.5 ppm), 1,170 ppm tungsten, 30,600 ppm zinc, and more than 10,000 ppm each copper and lead. Sample CMM-20-57 contained 6.73% copper and 5.55% lead. Drill holes 5 and 6 were drilled by the U.S. Bureau of Mines (Wiebelt, 1949). Drill hole samples contained as much as 0.3% lead, 3% zinc, 0.85 oz/ton silver ton, and traces of gold.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
99	Alta No. 2 mine William Hubbard	0060712880 T15N R13E sec.18	Gray, massive dolostone overlies quartz monzonite along a sheared, brecciated, tactitic, limonitic, gossan contact zone. Additionally, cross-cutting silicified tactitic sheared zones are also mineralized.	Accessible and inaccessible adits have been the source of untabulated past production.	Two rock grab samples were taken, CMM-20-36 and CMM-20-52, and contained as much as 111 ppm antimony, 16,000 ppm arsenic, 1,000 ppm barium, 47 ppm silver, 24,200 ppm zinc, 3,700 ppm copper, and more than 10,000 ppm lead. Samples from U.S. Bureau of Mines drill holes 1, 2, 3, 4, 7, 8, 9, 10 contained as much as 0.5% lead, 3.6% zinc, 1.8 oz/ton silver, and traces of gold (Wiebelt, 1949).
100	Annex (Alta/Mohawk; Mohawk; Three Wives; Mohawk Grp) William Hubbard	0060712879 T16N R13E sec.13	Alluvial fan accumulations of dolomite and quartz monzonite on the south side of the west end of Mohawk Hill.	Road cuts. No production is known.	None.
101	Stifersnite mine William Hubbard	0060712857 T16N R13E sec.07	Gray dolostone near a contact with quartz monzonite is mineralized by limonite and copper and lead minerals along low- and high- angle sheared and brecciated zones, some containing tactite mineral assemblages.	Numerous adits, shafts, pits, and trenches, from which unknown production has occurred.	Six rock samples were taken, CMM-20-N, CMM-20-Z, CMM-20-27 to CMM-20-29, and CMM-20-51, all grab except for CMM-20-27, a random chip, and contained as much as 585 ppb gold (average 199 ppb), 12,100 ppm arsenic, 502 ppm cadmium, 44 ppm molybdenum, 230 ppm rubidium, 241 ppm silver (average 57 ppm), 34,600 ppm zinc (average 13,900 ppm), 9,200 ppm copper, and more than 10,000 ppm lead.
102	Mohawk Mine Annex mine (Stifersnite Ext. mine; Pactolus) William Hubbard	0060712900 T16N R13E sec.08	Gray-to-tan dolostone with sheared zones, some containing tactite. Mineralization along sheared zones and in tactites includes quartz (some chalcedonic), limonite, magnetite, manganese oxides, galena(?), secondary zinc minerals, wollastonite, diopside (idocrase?), mica, and garnet.	An adit, two shafts, and a pit; undetermined production has occurred.	Four rock grab samples were taken, CMM-20-30 to CMM-20-33, and contained as much as 1,410 ppb gold (average 418 ppb), 3,950 ppm arsenic, 240 ppm cadmium, 70 ppm cobalt, 120 ppm silver, (average 39 ppm), 46,600 ppm zinc (average 16,200 ppm), and more than 10,000 ppm each copper and lead. Sample CMM-20-32 contained 16% lead.
103	Mohawk Mine Annex mine (Mohawk Hill SW 8; Pactolus) William Hubbard	0060712903 T16N R13E sec.08	Gray dolostone with sheared, brecciated zones, some associated with dikes, mineralized by tactite assemblages. Minerals include limonite, quartz, and copper carbonates.	Two shafts and two pits; undetermined past production.	Three rock grab samples were taken, CMM-20-V to CMM-20-X, and contained as much as 37 ppb gold, 5,530 ppm antimony, 1,160 ppm arsenic, 300 ppm cadmium, 16 ppm cobalt, 70 ppm molybdenum, 150 ppm rubidium, 1,470 ppm silver (average 713 ppm), 178 ppm tungsten, 13,900 ppm zinc, 5,650 ppm copper, and more

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
					than 10,000 ppm lead.
104	Mohawk Mine Annex mine (Mohawk Hill NW 17; Pactolus) William Hubbard	0060712901 T16N R13E sec.17	Gray dolostone with sheared zones, some associated with dikes, mineralized by limonite, quartz, copper carbonates, and galena(?).	An adit and three pits and trenches; undetermined past production.	Three rock grab samples were taken, CMM-20-40 to CMM-20-42, and CMM-20-60, and contained as much as 120 ppb gold, 5,490 ppm antimony, 3,750 ppm arsenic, 727 ppm cadmium, 56 ppm cobalt, 193 ppm molybdenum, 470 ppm rubidium, 499 ppm silver (average 210 ppm), 154 ppm tungsten, 53,700 ppm zinc, 8,300 ppm lead, and more than 10,000 ppm copper.
105	Yucca Queen mine (Yucca, Three Wives Group)	0060710280 T16N R13E sec.17	Limestone or dolostone near contact with rhyodacite porphyry. Mineralization is disseminated sulfides in porphyry, in quartz vein, and in tactite. Tactite contains garnet, wollastonite, and epidote. Mineralized rocks are stained by limonite, manganese oxides, and azurite and malachite. Cerussite, galena, and chalcopryrite have been reported (USBLM, 1980; Goodwin, 1957).	An adit, two shafts, and a pit. Production has occurred.1926: 25% lead, 7.90 oz/ton silver, minor gold and copper.1942: 2.6% lead, 3.34% copper, 17.30 oz/ton silver, and some gold (USBLM, 1980; Goodwin, 1957).	Two rock grab samples were taken, CMM-20-A and CMM-20-B, and contained as much as 23 ppb gold, 4,460 ppm antimony, 549 ppm arsenic, 930 ppm barium, 720 ppm chromium, 71 ppm molybdenum, 170 ppm rubidium, 160 ppm silver, 2,800 ppm zinc, 2,700 ppm copper, and 2,900 ppm lead.
106	Mohawk Mine Annex mine (Mohawk Hill NE NW 17; Pactolus) William Hubbard	0060712904 T16N R13E sec.17	Gray dolostone with sheared tactites at contacts with quartz monzonite and in sheared zones, some associated with green porphyritic dikes. The tactites include magnetite, limonite, quartz (some chalcedonic), mica, and copper carbonates.	An adit, three shafts, two pits, and a trench; undetermined past production has occurred.	Seven rock grab samples were taken, CMM-20-0 to CMM-20-U, and contained as much as 532 ppb gold, 3,940 ppm antimony, 1,370 ppm arsenic, 1,100 ppm barium, 280 ppm cadmium, 250 ppm rubidium, 604 ppm silver, 50,100 ppm zinc, and more than 10,000 ppm each copper and lead.
107	Clark Mountain Station mine (Mohawk Mine; Pactolus) William Hubbard	0060712907 T16N R13E sec.17	Gray fractured dolostone with sheared zones locally silicified, limonitic, and containing black oxides, copper carbonates, willemite(?), and smithsonite(?).	Two adits, two shafts, and a pit; undetermined small past production has occurred.	Three rock grab samples were taken, CMM-20-E to CMM-20-G, and contained as much as 299 ppb gold, 440 ppm silver, 970 ppm zinc, 8,100 ppm copper, and at least 10,000 ppm lead. Concentrates from an alluvial sample, CMM-20-C, contained 8 ppb gold, 420 ppm cerium, and 116 ppm thorium.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
108	Mohawk Mine Annex Extension mine (Mohawk Hill NW 39; Pactolus)	0060712905 T16N R13E sec.39	Gray dolostone with sheared zones, some associated with fine-grained dikes, mineralized by limonite, hematite, quartz (some chalcedonic), black oxides, copper carbonates, and secondary zinc minerals.	Four adits, a shaft, two pits, and a trench; undetermined past production has occurred.	Five rock grab samples were taken, CMM-20-H and CMM-20-J to CMM-20-M, and contained as much as 2,960 ppb gold (average 805 ppb), 430 ppm cadmium, 208 ppm molybdenum, 59 ppm selenium, 383 ppm silver (average 115 ppm), 175 ppm tungsten, 48 ppm uranium, 44,400 ppm zinc, and more than 10,000 ppm each copper and lead.
109	Mohawk Mine Annex Extension mine (North Mohawk Hill; Pactolus)	0060712906 T16N R13E sec.08	Limonitic tactite-like sheared lenses in gray dolostone.	An adit and shaft; undetermined past production has occurred.	One rock grab sample was taken, CMM-20-I, and contained 797 ppb gold, 39 ppm molybdenite, 31 ppm silver, 22 ppm tungsten, and 1,200 ppm copper. Concentrates from an alluvial sample, CMM-20-Y, contained 8.2 ppm antimony, and 51 ppm arsenic.
110	Henry mine (Pactolus)	0060711183 T16N R13E sec.16	Gray-to-black limestone or dolostone is crosscut by a sheared, brecciated, silicified zone striking N. 20° E. and dipping 65° NW. The mineralized zone is stained by limonite, manganese oxides, and copper carbonates.	A shaft was probably the source of unpublished past production (USBM confidential production files).	One rock grab sample was taken, CMM-20-D, and contained 345 ppm antimony, 65 ppm arsenic, 95 ppm silver, 53 ppm tungsten, 280 ppm zinc, 500 ppm copper, and 780 ppm lead.
111	Valley Wells Smelter (Miwok; Ivanpah; Cocopah) W. H. Snavely	0060711599 T16N R12E sec.07	Marly lakebeds with tufa cap occur. Slag from smelter was poured out onto lakebed and alluvium. Stockpiles of ore, limonitic and stained by copper carbonates, are intensely weathered. Spurs of bedrock and mineralization such as exposed at Mohawk Hill may extend under the Valley Wells area (W. H. Snavely, 1989, telephone conversation).	At least 14 tanks were used for vat-leaching ore (cement-copper debris in a stock pile). Slag from smelting accumulated in several adjacent piles covering several acres (65 ft by 25 ft by 20 ft, 80 ft by 160 ft by 20 ft, 75 ft by 15 ft by 5 ft). A shaft south of the slag accumulations was a water well; an additional cabled shaft at the smelter site probably was also dug for water.	Five grab samples were taken, CMM-1-A to CMM-1-E, and contained as much as 248 ppb gold (average 85 ppb), 41.5% iron, 130 ppm silver (average 53 ppm), and 23,900 ppm zinc.
112	Mercury/Saturn (Tuff 119, 120)	0060712765 T16N R12E sec.27	Beds of silt, sand, marl, and evaporite-cemented sandy, pebbly conglomerate.	Pits and trenches; no production has occurred.	Three rock grab samples were taken, CMM-19-A to CMM-19-C, and contained as much as 4 ppb gold, 3 ppm silver, and 40 ppm boron (average 27 ppm).
113	Ace Millsite Group mine Molycorp	0060712882 T16N R12E sec.23	Alluvial fan accumulations comprised mainly of limestone and dolostone pebbles and cobbles.	Sand and gravel have been produced; water is being produced from several wells.	No samples. Resources of sand, gravel, and water exist.
114	Sand and Gravel Pit	0060712627 T16N R13E sec.18	Alluvial fan accumulations are mainly comprised of rounded to subangular	Production has occurred from a now-rehabilitated pit.	No samples were taken. Resources of sand and gravel exist.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
			limestone and dolostone.		
115	Sand and Gravel Pit	0060712767 T16N R13E sec.17	Alluvial fan accumulations of sand, pebbles, and cobbles, mainly of limestone and dolostone, rounded to subangular.	Past production from a now-rehabilitated pit has occurred.	No samples were taken. Resources of sand and gravel exist.
116	Cadre Mine claims Cadre Minerals, Inc., Medford	0060713003 T14N R10E sec.08	Precious metals and other important metals and minerals are believed to occur within Tertiary and Quaternary alluvium.	None known; claims were not visited at claimant's request.	None.
117	Gold Bug group) (Friday and Saturday group) Unknown	0060710729 T15N R10E sec.23	The claim group is underlain by Precambrian metamorphic rock. At a shaft at the northwest end of the claim group, there appears to be a 10-in.-thick bed of gneissic quartzite, which strikes N. 50° W., dips 90°. The quartzite is sandwiched by two 1-ft-thick bands of coarse black biotite schist. Rock to the northeast of the quartzite and schist is a dense gray foliated trachyandesite, to the northwest is a biotite hornblende granite gneiss with laminar foliation. At a pit 80 ft S. 65° E. of the shaft, a 4-ft biotite argillite zone is sandwiched by granite gneiss; foliation trends N. 60° W., dips 65°. About 600 ft, S. 45° E. of the first shaft, a shaft was sunk on a 4-ft-thick zone of coarse biotite argillite which strikes N. 30° W., dips 80° W.; prominent joints strike N. 65° E., dip 53° SE.	An 18-ft-deep vertical shaft is at the northwest end of the group; 80 ft S. 65° E. is a 10-ft shaft start, and 680 ft S. 45° E. of the first shaft at the southeast end of the group, is a 22-ft-deep vertical shaft.	Three samples were taken. A 10-in. chip sample (CTP-34) across the quartzite at the northwest shaft contained 8 ppb gold, <2 ppm silver, and 150 ppm cerium, ppm lanthanum, 11.5 ppm tin, and 30.4 ppm thorium. A chip sample (CTP-35) of the two adjacent biotite zones (total - 2 ft) contained 36 ppb gold, and <2 ppm silver, 500 ppm rubidium, 16 ppm selenium, and 36.6 ppm thorium. A 4-ft chip sample (CTP-36) across the biotite zone at the southeast shaft contained <2 ppb gold, <2 ppm silver, 42 ppm cerium, 42 ppm rubidium, 10.9 ppm samarium, and 20.2 ppm selenium.
118	Unnamed placer location Unknown	0060710736 T15N R11E sec.19	The area is underlain by Quaternary alluvial fan deposits.	No workings were found.	None were taken. No significant stream channels suitable for concentration of placer gold were found; drainage patterns were limited to distributary alluvial fan channels only.
119	Trona Palm	0060710737	This property was not found.	None found.	None.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
120	Coin Block (Mammoth) Unknown	0060710738 T15N R11E sec.17	Highly silicified and locally epidotized light gray-to-white granite, granite gneiss, and biotite schist. Malachite stains are common. Three prominent joint orientations (of many orientations) are N. 30° E., dip 90°; N. 50° W., dip 54° SW.; and N. 75° W., dip 34° NE. The N. 75° W attitude appears to follow the most common orientation of foliation, which, like jointing, is quite varied.	A 20-ft-deep shaft (mainly in white granite), a 20-ft-long trench 40 ft S. 70° E. of the shaft (mainly in metamorphic rock), and a 10-ft diameter pit (mainly granite float) 225 ft S. 10° W. of the shaft make up the workings.	One random chip sample from the 20-ft trench (CTP-123) contained 160 ppb gold, 70 ppm silver, 3,100 ppm copper, and 114 ppm lead, and 22 ppm tungsten.
121	Telegraph  Cascade Energy and Metals Corp	0060710192 T15N R11E sec.17	A vuggy quartz vein with lesser siderite and calcite, which is characterized by a banded laminae texture typical of open-space-filling, strikes N. 31° E. and dips 40° NW. (locally as steep as 54° NW.) within altered coarse-grained quartz monzonite. The vein obviously extends over 0.8 mi, because of discontinuous exposures observed in numerous workings.	Underground workings on three patented claims include four inclined shafts extending to over 100 ft (one reportedly went to 275 ft), several hundred feet of drifts, mainly at the 75- and 125-ft levels and several stopes, one extending to surface. The underground workings are largely inaccessible. Numerous surface trenches and pits have been installed during recent years, many over old workings, which were described by Tomo Ito (1969). A 200-ft-long, 40-ft-wide trench has been excavated over shaft no. 1 near the south end of the property; 600 ft north, another 175-ft, N. 30° E. trending trench obscures shafts no. 2 and 2A. U.S. Bureau of Mines production figures indicate 2,178 tons of ore, 2,178 oz gold, 5,423 oz silver, and 500 lb of copper were mined during the years 1932 through 1942 and 1946 through 1948 (production by year was published by Hewett, 1956, p. 120).	Five samples were taken (CTP 31-33, 121, 122): a 20-ft chip sample was taken along the footwall (CTP-31) face at the south 200-ft-long trench, representing the lowest 2 ft of vein, contained 352 ppb gold and 12 ppm silver. A 10-ft sample, representing the rest of the vein system to the hanging wall (CTP-32), contained 2,670 ppb gold and 27 ppm silver. A grab sample (CTP-33) of material from within the vein system at the 175-ft trench contained 1,110 ppb gold and 7 ppm silver. A 5-ft chip sample (CTP-121) from the shaft directly north of the east-west access road (shaft no. 3 of Tomo Ito) contained 2,010 ppb gold and 12 ppm silver. A 1-ft chip sample (CTP-122) from an exposed vein segment at a 40-ft-long pit 0.2 mi north of shaft no. 3 contained 263 ppb gold and 8 ppm silver. Office of Mineral Exploration, U.S. Geological Survey, sponsored drilling in 1968 (Owens, 1980, p. 13) indicate a total measured tonnage of 72,750 tons of ore at a grade of 0.5 oz/ton gold and 1.16 oz/ton silver.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
122	Chesterfield & Old Gold claims  Unknown	0060710740 T15N R11E sec.15	The claims are mainly underlain by pink coarse-grained granite with 12- to 15-cm-long pink feldspar phenocrysts. At the east trench, a weakly sheared zone at least 3 ft wide is concordant with a N. 83° E., dip 57° NW., joint set; other joint sets trend N. 33° W., dip 70° SW., and N. 68° W., dip 90°. The SW trench contained granite only. The NW trench exposes a 10-ft-wide zone of gougy and epidotized zone which appears to have a westerly trend and dips steeply; float above the trench indicates the zone may be capped by a highly silicified granitic aphanite.	A 20-ft-long N. 80° E. trending trench 200 ft east of dirt road, and two 20-ft-long north-trending trenches about 500 ft west of road and about 800 ft apart in a north-south direction.	Four samples were taken (CTP 114-117: a sample of granite from the east pit (CTP-114) contained <2 ppb gold and <2 ppm silver, and a sample across the shear zone at the same pit (CTP-115) contained <2 ppb gold and 3 ppm silver; a sample of epidotized and gougy granite from the northwest pit (CTP-116) contained <2 ppb gold <2 ppm silver; a sample of silicified aphanite (CTP-117) contained <2 ppb gold and <2 ppm silver.
123	Yucca Palm group  Unknown	0060711595 T15N R11E sec.20	The Yucca Palm group appears to cover an extension of the Telegraph vein to the southwest.	Six pits are shown on the Granite Spring 7.5' quadrangle, but were not visited.	No samples were taken.
124	Lost Lead  Unknown	0060710747 T15N R11E sec.21	A 2-ft-wide shear zone exposed in a shaft strikes N. 60° W. and dips 90°. The zone is about one-half quartz and one-half gouge. The country rock is a mafic hornblende biotite gneiss; foliation is mainly subparallel to the shear zone. About 200 ft south of the shaft on a small knob is a milky quartz and quartz breccia blowout; iron-oxide-stained jointing strikes N. 30° E. with a 90° dip. About 0.4 mi north of the shaft, 200 ft east of the access track, a 2.8-ft-wide shear zone in granite exposed in a trench strikes N. 66° W., dips 66° SW. Shearing was weak, with intrazonal joints of many orientations, kaolinized and iron-stained and slightly epidotized granite clasts mainly unrotated and only slightly displaced.	The main shaft is about 45 ft deep. The trench at the shear zone about 0.4 mi north trends west-northwest and is 20 ft long. Two pits about 0.4 mi S. 60° E. of the shaft are shown on the Granite Springs 7.5' topographic quadrangle, but were not visited.	Three samples were taken. A 2.8-ft-chip sample (CTP-118) across the shear zone in the north trench contained <2 ppb gold and <2 ppm silver. A dump sample (CTP-119) of quartz and gouge from the shaft contained <2 ppb gold and <2 ppm silver. A random chip sample (CTP-120) of milky quartz and quartz breccia, iron-oxide-stained along fractures, contained 693 ppb gold and 86 ppm silver.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
125	Raw Silver Cone prospect	0060712412 T14N R11E sec.05	Two clayey, brecciated, iron-stained shear zones exposed for 200 ft in Cretaceous granite; host rock locally altered and leached; malachite coats 10% of fractures; one zone is 2 ft thick and strikes N. 45° W., dips 43° NE.; other zone is 3 ft thick, strikes N. 79° W., and dips 45° SE.; five zones of pink-to-white altered, massive clay-like material are as much as 90 ft across.	Five trenches totaling 239 ft and 2 adits totalling 101 ft; one caved adit and two prospect pits.	Twelve samples collected (by Rumsey and McMahon, 1985, p. 9, no. 2) from veins and altered zones; three samples contain only traces of gold; five have 0.05-0.32 oz/ton gold; three have only traces of silver; five have 0.4-1.8 oz/ton silver; one select sample from 50 lb stockpile contains 41.3 oz/ton silver; two samples contain only traces of copper. Mineralized rock of limited extent. No resources are apparent.
126	Holladay Gold prospect	0060712521 T14N R10E sec.12	Northeast-trending contact zone between Cretaceous granite and Proterozoic schist traced for 145 ft; rock along the contact altered and silicified (5-ft-thick zone of alteration).	Three 5-ft-square by 3-ft-deep prospect pits.	Three chip samples collected (Rumsey and McMahon, 1985, p. 9, no. 3) across Proterozoic schist, silicified schist, and gneiss contained no gold or silver.
127	Unknown Unknown	0060713001 T14N R11E sec.19	The prospect was not examined; however, the prospect area is near the northwest corner of section 19 (unsurveyed) in an area underlain by Precambrian metamorphic rock and intrusive Mesozoic granite (Jennings, 1961).	One pit is shown near the northwest corner of section 19 on the Granite Spring 7.5' quadrangle.	None available.
128	Little Dove prospect	0060712414 T15N R10E sec.36	Three brecciated quartz-filled shear zones contain gold and silver in foliated granite; shear zones discontinuously exposed for 130 ft; quartz is vuggy and iron-stained, locally contains limonite and pyrite; zones are about 1 ft thick, strike N. 80° E., N. 70° W., and N. 30° W.; all dip 50° N.	One 7-ft <sup>2</sup> by 25-ft-deep shaft; one 8-ft <sup>2</sup> by 23-ft-deep shaft inclined 50° N. Three 5-ft <sup>2</sup> by 3-ft-deep pits.	Six chip samples (Rumsey and McMahon 1985, p. 9, no. 4) contain trace amounts to 0.15 oz/ton gold; one select grab sample contains 0.86 oz/ton gold and 1.2 oz/ton silver; four chip samples contain 0.4 oz/ton silver. Mineralized rock of limited extent; no resources apparent.
129	Bronco prospect	0060712522 T14N R11E sec.29	A 4-in-thick quartz-filled shear zone is exposed for 30 ft in a 5-ft-thick zone of bleached, silicified foliated granite.	One 50-ft by 100-ft bulldozed area.	One chip sample (Rumsey and McMahon, 1985, p. 9, no. 5) collected across the shear zone contained no gold or silver.
130	Cinder occurrences	0060712524 T14N R11E sec.29	Two cinder cones consist of red and black, coarsely to moderately cellular well-bedded cinders that range in grain size from <0.13 to 6 in. angular blocks.	None.	Cinder prospects contain 30 million tons of volcanic cinders (Rumsey and McMahon, 1985, p. 9, nos. 6 and 7).

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
131	Cima Cinder mine Cima Cinder Mining Company	0060712489 T14N R12E sec.20	Naturally disaggregated black and red cinders occur within late Tertiary volcanic cinder cones. Cone surfaces consist predominantly of black cinders and flows, while red cinders, which result from iron being in a high oxidation state, commonly formed within the cinder cone cores.	The main pit extends several hundred feet across the east face of a cinder cone at the noted location; a second pit occurs 0.8 mi south on the west face of a cone in section 9. Lesser excavations occur in four other cones. The property is currently inactive; recorded past production is 130,000 tons, but total production was probably much greater.	Two samples, a predominantly red (80%) (CTP-107) and a predominantly black (95%) (CTP-108) cinders were taken, both within the 1/4 in. to 3/8 in. range. These samples contained 46.70% SiO <sub>2</sub> , 16.3% Al <sub>2</sub> O <sub>3</sub> , 11.1% Fe <sub>2</sub> O <sub>3</sub> , 1.93% K <sub>2</sub> O, 4.71% Na <sub>2</sub> O, 7.66% CaO, and 6.60% MgO, and 47.6% SiO <sub>2</sub> , 16.32% Al <sub>2</sub> O <sub>3</sub> , 10.83% Fe <sub>2</sub> O <sub>3</sub> , 1.82% K <sub>2</sub> O, 4.17% Na <sub>2</sub> O, 7.84% CaO, and 6.79% MgO, respectively. End uses include cinder block and road construction, and landscape applications. Resources have not been estimated, but are believed to exceed 12 million tons.
132	Unnamed prospect	0060712520 T15N R12E sec.07	1.5-ft-thick dike strikes N. 30° E., 35° SE. in Proterozoic(?) gneiss; dike has 4 in. of gouge along hanging wall, 2 in. along footwall.	A 20-ft-long adit.	One sample collected across dike and gouge contains no gold or silver.
133	Tuff claim group Shadow Val Res/Exp, D.Litchfie	0060712996 T15N R12E sec.09	The Tuff placer claim group covers about 24 mi <sup>2</sup> (16 mi <sup>2</sup> within the East Mojave Scenic Area) and the remainder north of Interstate Highway 15. The area is underlain by Quaternary and Tertiary alluvial fan deposits. Within the claimed area the owners believe the alluvium hosts an exotic deposit of precious metals, including gold, silver, and platinum group elements; the metals occur as an adsorbed metallic compound coating on alluvial grains, and are believed to be undetectable by fire assay because they are fumed off as metallic halide compounds.	North of Interstate Highway 15 a selected 10-acre area (center, sec. 13, T16N, R11E), 72 rotary drill holes were augered to a depth of 20 ft on 100-ft-spacing; alluvium was also exposed by a 700-ft-long, 30-ft-wide, 4-ft-deep trench. South of Interstate Highway 15, workings are limited to several rotary drill holes, which were sunk along an unimproved north-south road near the western boundary of sec. 28, T15N, R12E. At the time of this study, Mr. Litchfield, CEO, had tested recovery techniques in a small pilot plant and was prepared to begin production at a small plant in Sandy Valley.	The Bureau of Mines took 12 alluvial samples, 6 primary samples and 6 duplicates as follows: CTP-82, -83, (main trench, sec. 13, T16N, R11E); CTP-85, -86 (drill cuttings, sec. 28, T15N, R12E); CTP-99, -100; -101, -102; -103, -104; and CTP-105, -106 (CTP-99 through -106 were augered in T15N, R12E respectively, at four localities, respectively: at the center, N1/2, sec. 3; center, SE1/4 sec. 9; center, sec. 21; and center, N1/2 of N1/2 sec. 33. Even numbered samples were analyzed for gold, silver, and PGE (platinum group elements) by fire assay with an ICP fluorescence finish. Odd numbered samples were analyzed by hot aqua regia digestion with an ICP fluorescence finish. A recombined split from each odd and even numbered sample was digested by cyanide leaching and analyzed by ICP fluorescence. Gold was detected in three aqua regia-



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
					digested samples: CTP-101 and 103, 3 ppb gold; and CTP-105, 11 ppb gold. No gold or PGE were detected by fire assay; three aqua regia-digested samples, cyanide-leached sample splits contained: <2 ppb gold (CTP 99-100), 3 ppb gold (CTP 101-102), and 7 ppb gold (CTP 105-106).
134	New Harmony North Pit in Mineral Properties Dev. claims	0060711201 T15N R12E sec.36	The south pit exposes a 2- to 4-in-wide, milky quartz vein, which strikes N. 50° W. and dips 90° to 85° SW. The vein cuts white and black hornblende biotite gneiss, which has thin gneissic laminations, to 1/4 in thick, and of varied strike and dip, commonly about N. 50° W., dip 60° NE. Outcrops on the access 4-wheel-drive track indicate the Teutonia Quartz Monzonite contact is only 10 to 50 ft below the trench platform. Geology at the north is complexly faulted and altered gneiss with several quartz veins, up to 2 in thick, which commonly strike N. 55° W. and dip 90°. Faults strike N. 35° E. and dip 85° and 35° east.	Workings consist of two trenches. The single-faced southern trench is cut into an east slope to a face height of 10 ft. The associated platform extends northwest for 75 ft and is 25 ft wide. The second trench is about 500 ft N. 50° W. of the first on the north nose of a hill. The trench extends about N. 20° E. for 40 ft, is 12 ft deep, and has east and west side walls. U.S. Bureau of Mines production records indicate minor production in 1921.	Four samples (CTP 71-74) were taken. At the south pit, a sample of the quartz vein (CTP-71) contained 24 ppb gold, 8 ppm silver, and 600 ppm copper. A sample of the unaltered or weakly altered gneiss (CTP-72) contained <2 ppb gold, <2 ppm silver, and 240 ppm copper. At the north pit, a sample of the moderately kaolinized and heavily limonite-stained gneiss (CTP-73) contained 8 ppb gold, 3 ppm silver, and 480 ppm copper. A sample (CTP-74) of quartz from a 1-in. and 2-in.-thick vein contained 8 ppb gold, <2 ppm silver, and 330 ppm copper.
135	J. F. Morris	0060711188 T15N R13E sec.	This property was not found, but may be the unknown name of no. 140 (East Shaft).	None found.	None.
136	Gibson	0060711174 T15N R13E sec.	This property was not found, but may be the unknown name of no. 141, (West Shaft).	None found.	None.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
137	Budget  Current owner unknown 1939-FEMcCa	0060711155 T16N R13E sec.20	A medium gray limestone characterized in many places by solution collapse breccia with a hematitic argillaceous and siliceous matrix strikes N. 17° W. and dips 47° SE. (at the north adit). The limestone breccia is overlain by a 4.5-ft-thick unit of hematite-colored argillite. Exposure is poor at the main shaft, but most of the dump is medium gray limestone and brecciated, iron-oxide-stained limestone makes up less than 5% of the dump. Near an adit portal southeast of the main shaft, a breccia appears to be tectonic and controlled by a N. 15° E (dip 70° NE)-trending joint set.	The main shaft is over 115 ft deep. The north adit is 900 ft north of this main shaft, extends S. 15° E. and declines at about 20°. A second adit, about 200 ft southeast of the main shaft, extends horizontally N. 45° E. into the hillside. Two small pits between the north adit and main shaft were not visited. Minor production of gold, silver, copper, and lead occurred in 1939.	Four samples were taken (CTP 55-57, 70): a 5-ft chip of solution collapse limestone breccia at the north adit (CTP-55) contained 9 ppb gold, <2 ppm silver, 14% copper, and 1% lead; a 4.5-ft chip (CTP-56) of overlying reddish brown siliceous argillite contained <7 ppb gold, <2 ppm silver, 10 ppm copper, and 130 ppm lead; a select grab dump sample (CTP-57) of hematite-stained limestone contained 8 ppb gold, <2 ppm silver, 10 ppm copper, and 26 ppm lead; finally a random chip sample (CTP-70) of pink-stained tectonically brecciated limestone contained <2 ppb gold, <2 ppm silver, 23 ppm copper, and 35 ppm lead.
138	Lower Rathburn  John Rathburn, Mtn Pass, CA	0060712992 T16N R13E sec.22	A medium-gray, sulfurous limestone with alternate lighter and darker laminae overlies a charcoal-gray, more massive silicified and commonly brecciated crinoidal limestone; the contact appears to be disconformable. Limestone beds strike N. 12° E. and dip 27° SW. Almost no sign of mineralization was seen in place except for a few iron-oxide stains along bedding planes and fractures.	A 45-ft-long adit extends S. 60° W.; the upper 0.5 ft of the adit is in the upper laminated limestone. The dump contained a few 12-in.-wide boulders of goethitic silicified material, presumably from a pocket mined out of the adit.	Three samples were taken: A sample (CTP-93) of the upper laminated limestone contained 11 ppb gold. A sample (CTP-94) of the lower charcoal gray limestone contained 11 ppb gold. A select grab sample (CTP-95) of goethitic material contained 63 ppb gold, <2 ppm silver, 40 ppm copper, 1,860 ppm lead, and 2,200 ppm zinc.
139	Unknown name  Unknown	0060712993 T16N R13E sec.22	A dark-gray limestone breccia formed by numerous intersecting joints appears to be tectonically formed. Hematitic matrix material makes up 20% or less of the rock. A 2- to 9-ft-thick basalt sill, dike, or flow, intrudes the limestone, strikes N. 82° E. and dips 27° SE., and may be the cause of brecciation.	A two-bench open pit is cut into a north-facing slope; the pit is 50 ft long (east-west), 35 ft wide, and 25 ft high.	Two samples were taken: a 3.5-ft vertical chip sample (CTP-91) of a heavily goethitic, silicified and kaolinized zone between the lower contact of the basalt and the limestone (possibly palagonite) contained 12 ppb gold, <2 ppm silver, and 19 ppm copper. A 5-ft vertical chip sample (CTP-92) of limestone breccia, 20-25 ft below the base of CTP-91, contained <2 ppb gold, <2 ppm silver, and 11 ppm copper.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
140	Unknown name (East Shaft)  Unknown	0060712997 T16N R13E sec.22	Medium-gray, massive to thin-bedded limestone; Beds commonly 0.5 in. thick, but as much as 3 in. thick. Hematitic and silicified mineralized material common along joints and bedding planes (strike N. 20° E., dip 25° W.) in cut face behind shaft. Probable solution collapse limestone breccia with mineralized matrix are common on dump.	One 40-ft-deep shaft and associated cut platform and dump.	Two samples were taken: 1) a 0.8-ft-long chip sample (CTP-96) from cut face taken across bedding (hematite and worm burrows occur along bedding planes) contained <2 ppb gold and 11 ppm copper. A grab sample (CTP-97) of mineralized breccia from the dump contained <2 ppb gold, <2 ppm silver, and 0.001% copper.
141	Unknown name (West Shaft)  Unknown	0060712998 T16N R13E sec.21	A well, but thinly, bedded (0.5 in.) medium- to dark-gray limestone breccia (shaft collars in light-gray limestone). The breccia matrix consists of hematized and silicified mineralized material. Breccia clasts and limestone-matrix contacts as subround to rounded, do not appear to follow jointing, and are probably solution-collapse features. Limestone becomes darker and more massive 20 ft down section; breccia becomes much less common.	One shaft, about 17 ft deep, is the only working found.	One select grab sample (CTP-98), taken from the dump, contained <6 ppb gold, <6 ppm silver, 14 ppm copper, and 63 ppm lead.
142	Upper Rathburn  John Rathburn, Mtn Pass, CA	0060712994 T16N R13E sec.23	A somewhat iron-oxide-stained, buff-colored, 12-ft-thick, limy siltstone, strata-bound zone with local malachite stains occurs within a buff white, possibly carbonate platform limestone, about 10 to 20 ft above a dark blue-gray, cherty limestone. Bedding strikes N. 22° E. and dips 24° W. To the north, about 120 ft, at about the same stratigraphic position, is a small 2-ft by 3-ft outcrop of an iron-oxide-stained dacite dike or sill.	The iron-oxide-stained, limy, siltstone zone is exposed in a natural overhanging cliff-formed cave about 100 ft above, and on the west side of a stream. A short adit extends the cave to the northwest. About 120 ft north a small pit exposes the dacite. Two pits, about 100 and 500 ft northeast across the drainage, were not visited.	Four samples were taken (CTP 87-90): a 2-ft chip sample (CTP-87) of dacite from the small pit contained 8 ppb gold, <2 ppm silver, 26 ppm copper, and 15 ppm scandium. A 1.3-ft chip sample (CTP-88) of fresh rock from the 12-ft iron-oxide-stained and generally weathered zone contained <2 ppb gold, <2 ppm silver, and 12 ppm copper. Dark grey (CTP-89) and buff white (CTP-90) limestone samples contained 14 and 5 ppb gold, respectively.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
143	Dobbs group  Robert Nelson, Mtn Pass, CA	0060712995 T16N R13E sec.26	Iron-oxide-permeated and manganese oxide-stained mineralized material appears to be strata-bound within a buff white limestone, possibly a carbonate platform facies. The white facies is between 10 and 20 ft above a dark gray more massive and possibly deep water facies. About 800 ft east of the strata-bound mineralization is a small (few tens of feet) outcrop area of tactite adjacent to a small intrusive granitic plug.	Workings on the strata-bound zone (south to north) include: 1) an open adit suspected to be less than 100 ft long; 2) a partially open stope, 100 ft N. 10° W. of the adit, and a caved adit about 100 ft northwest of the stope. These workings extend north and northwest of a small drainage on a west-southwest facing slope. A 10-ft-deep shaft start occurs in the tactite zone 800 ft east of the other workings on a south-facing mountain slope.	Four samples were taken (CTP 63-66): a select sample (CTP-63) of malachite-stained tactite from the east shaft start contained 756 ppb gold, <2 ppm silver, >1% copper, 355 ppm lead, 1.23% zinc, and 50 ppm tungsten. A 2-ft chip sample (CTP-64) taken 100 ft east of the south open adit up the drainage, and 10 ft above the drainage on the south side, contained 10 ppb gold, <2 ppm silver, and 210 ppm copper. A select stockpile grab sample (CTP-65) from the open adit dump contained 365 ppb gold, 42 ppm silver, 1,600 ppm copper, >1% lead, and 1.21% zinc. A 2-ft chip sample (CTP-66) from the mineralized zone in the partially open stope contained 140 ppb gold, 9 ppm silver, 1,670 ppm copper, >1% lead, and 0.98% zinc.
144	Blue Buzzard	0060711600 T16N R13E sec.25	Oxide minerals of iron, lead, copper, and silver, presumably after sulfides, occur strata-bound and commonly stratiform. The cherty and limonitic 2- to 5-ft-thick zone of mineralized beds occur within a buff-white limestone with about 5 ft stratigraphically above a dark blue-grey limestone with 1/4-in.-thick argillaceous beds. The zone strikes N. 48° W. and dips 60°(?) SW. A (thrust?) fault occurs 12 ft above the mineralized zone; it is greater than 10 ft thick, composed of chloritic mylonite and slippage planes, and is subparallel to bedding. The fault zone is only locally mineralized with 1-ft-thick podiform limonitic zones, which extend only a few feet along the dip direction. The stratigraphically controlled mineralized zone appears to be the same zone found at the Lead Lady and the Iron Horse, which is greater than 0.6 mi to the southeast.	The Blue Buzzard was located in 1917 and is predominantly a lead-silver mine (Wright and others, 1953, p. 108). An inclined shaft follows the dip of the thrust zone; according to production records, the shaft is/was 70 ft deep and accompanied by 60 ft of drift in 1925. Two smaller inclined shafts occur 20 and 40 ft northwest of the main shaft along the mineralized zone. Production occurred in 1925, 1940, 1947, and 1948, and totaled 143 tons (see table A-2).	Three samples (CTP 9-11) were taken. A 3.5-ft chip sample (CTP-11) across the zone, 40 ft north of the main shaft contained 20.0% iron, 5,700 ppm lead, >1% copper, and 14.1% zinc. A 1-ft-thick chip sample (CTP-10) across a podiform mineralization in the shear zone at the main shaft contained 22.4% iron, >1% lead, 0.56% copper, and 67 ppm silver. A 6-ft-thick chip (CTP-11) sample across the fault zone 20 ft northwest of the main shaft contained 6.9% iron, 380 ppm lead, 500 ppm copper, and 2,200 ppm zinc (see table A-2 for other elemental concentrations. Additional sampling, mapping, and perhaps drilling will be required for resource estimation.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
145	Lead Lady	0060712630 T16N R13E sec.30	Oxide minerals of iron, lead, copper, and silver, presumably after sulfides, occur strata-bound and commonly stratiform, within a bed average about 6 ft thick. The bed strikes between N. 35° W. and N. 65° W. and dips 60° W. The mineralized bed occurs at the base of a cherty buff-white limestone containing prominent gray or brown laminae (<1 mm)). The zone overlies a dark blue-gray limestone with 1/8 to 1/4 in. thick light brown argillaceous beds, which are discontinuous due to deformation. Stratigraphic position of the zone is identical to the position of the Blue Buzzard and Iron Horse.	The Lead Lady adit is 0.2 mi southeast of the Blue Buzzard and 0.4 mi northwest of the Iron Horse; it is 225 ft long and follows the variable strike northwest from the portal, which is on the north side of a small gorge cut by an intermittent drainage. No production is recorded.	A two-ft-thick sample (CTP-12) was taken across the zone below the overlying limestone at the portal (the lower 4 ft of the zone was not exposed at the locality). The sample contained 4.7% iron, 48 ppm lead, 215 ppm copper, and 200 ppm zinc. Additional sampling, mapping, and perhaps drilling will be required for resource estimation.
146	Iron Horse (Jack Rabbit)	0060710254 T16N R13E sec.36	Oxide minerals of iron, lead, copper, and silver, presumably after sulfides, occur strata-bound, and commonly stratiform, within a bed, which ranges from 0.5 ft to over 10 ft wide due to deformation. The bed strikes N. 10° W. and dips 50°-60° W. The facies occurs within, but at or near the base of, a buff white limestone, which locally contains re-cemented clasts, which appear to be storm-formed. Beneath or near the mineralized zone is a dark blue-grey limestone with 1/4 in. shaley beds; a breccia facies within an east-facing cut appears to have been formed by solution collapse. The zone is probably the same mineralized horizon found at the Lead Lady and Blue Buzzard mines.	The main workings consist of two shafts inclined westward. The north shaft is 190 ft deep, with minor drifts and stopes, (Wright and others, 1953, p. 109. Several pits and trenches expose the zone northward. Primarily a lead-silver mine, the property produced a total of 325 tons of ore during the years 1927, 1937, 1941, and 1942 (see table 4). Development work was done in 1943 with the aid of a Reconstruction Finance Corporation loan, but no further production is recorded, except for 82 tons in 1955.	Three samples (CTP 13-15) were taken. A 15-ft chip sample (CTP-13), probably representing a stratigraphic thickness of less than 10 ft, contained 42.7% iron, >1% lead, 0.36% copper, 3.15% zinc, 276 ppb gold, and 35 ppm silver. Additional sampling, mapping, and perhaps drilling, will be required for resource estimation.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
147	Defante Sandstone quarry  V Defante/F Rathbun/Molycorp	0060712977 T15.5N R14E sec.30	A V-shaped area is underlain by Jurassic Aztec Sandstone (Evans, 1971) about 1,000 ft wide; near the center of S1/2 sec. 25, T16N, R13E and extends southeast into NE1/4 sec. 36 and the NW1/4 sec. 31, T15.5N, R14E), thence northeast to the center of S1/2 sec. 30. The sandstone varies from a rose to buff-gray color, but is mainly salmon pink; it is very fine-to-fine-grained and is well-sorted. On the eastern half of the claims the stone strikes N. 40° E., dips 15° NW., and is weakly metamorphosed; on the western part, it strikes N. 15° W., dips 65° W., and is dense quartzite. Footprints of a three-toed dinosaur are known to occur.	Several shallow pits and stripped areas, mainly in the SW1/4 of SW1/4, sec. 30, T15.5N, R14E.	About 30% of the stone, or less, splits readily into flat flagstone suitable for facing on the eastern half of the claim block; more highly metamorphosed stone on the western half is too dense for use as facing stone. Two random chip samples (CTP-7 and CTP-8), from the western and eastern part of the block, contained 93.96% SiO <sub>2</sub> , 3.10% Al <sub>2</sub> O <sub>3</sub> , 0.73% Fe <sub>2</sub> O <sub>3</sub> , 0.08% Na <sub>2</sub> O, 1.20% K <sub>2</sub> O, and 0.09% CaO, 96.50% SiO <sub>2</sub> , 2.32% Al <sub>2</sub> O <sub>3</sub> , 0.55% Fe <sub>2</sub> O <sub>3</sub> , 0.06% Na <sub>2</sub> O, 0.80% K <sub>2</sub> O, and 0.09% CaO, respectively (table A-2). Several hundred tons were produced in 1951 (Wright and others, 1954, p. 162). Because of the dinosaur footprints found during stone production, the BLM has classified the stone area as an Area of Critical Environmental Concern.
148	COGS group	0060712821 T15.5N R14E sec.25	The country rock is garnetiferous Precambrian gneiss. A N. 5° W. striking, 90° dipping shear zone, about 5 ft thick is exposed in a surface cut.	One 10° decline has many nearby dozer scrapings. No production has been recorded.	One select (CDC-47) and one 5-ft-long chip (CDC-48) sample were taken. Sample CDC-47 contains 8 ppm silver. No resources have been delineated.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
149	Silver Star (Lucky Lode; Roger's Camp; Telescope) C.H.Richards/C.E.& H.L.Hammett	0060710380 T15N R14E sec.06	Mineralization is in the form of thin scheelite and quartz veins to 0.05-in.-thick, predominantly within a tactite of epidote and other calcium silicate minerals, and less garnet and quartz. The tactite formed along the intrusive contact between the Teutonia quartz monzonite and the Goodsprings dolomite. Metalliferous minerals include magnetite, chalcopryrite, galena, sphalerite, pyrite, arsenopyrite, cassiterite, scheelite, gold, and silver. The mine area is included in geologic mapping by Evans and others, 1975.	Three shafts and about a dozen pits were found on the property. A 30-ft-deep shaft lies 100 ft N. 40° E. of an old dilapidated cabin; a 28-ft shaft is about 300 ft S. 5° W. of the cabin; and a 15-ft shaft is about 300 ft S. 70° E. A 5-ft-deep pit near the 28-ft shaft may be a sloughed shaft. Maurice Mulcahy, Dagget, CA, shipped 2 tons of ore in 1926, containing 168 oz silver and 190 lb of lead from two 10-ft-deep pits. Jay Ricketts, Tustin, T. L. Button, Cima, and Elmer Schneider, Santa Ana, CA (Wright, 1951, p. 144) did further development in the late 1940's and early 50's, but no further production is reported.	Three samples were taken (CTP 1-3): an iron-oxide-stained and quartz-veined predominantly limestone grab sample (CTP 1) was taken from the 30-ft shaft dump and contained <1 ppb gold, <2 ppm silver, 46 ppm copper, 38 ppm lead, 900 ppm zinc, and <1 ppm tungsten. A copper-stained tactite sample (CTP-2) from a small stock pile at the cabin contained 50 ppb gold, 29 ppm silver, >1% copper, 63 ppm lead, 440 ppm zinc, and 10 ppm tungsten. A 3.5-ft-long tactite chip sample (CTP 3) was taken from the north face of the 15-ft-deep shaft, and includes a 6-in.-wide vertical limonitic zone which strikes N. 25° E.; this sample contained 41 ppb gold, 60 ppm silver, >1% copper, 63 ppm lead, and 840 ppm zinc. Resource calculation will require additional field work, and perhaps drilling.
150	GMX group  G. M. Exploration, Mtn Pass, CA	0060712978 T14N R14E sec.05	The claim block is underlain by propylitically altered (light green) and limonite-stained Teutonia quartz monzonite. Perhaps 10% of the rock consists of secondary quartz veins from less than 1/4-in. to several inches thick.	A block of 23 claims, which are circumscribed by claims of the White Eagle group. Workings mainly consist of a northwest-trending, 350- by 150-ft bulldozed area, where the altered quartz monzonite is exposed; a 20-ft by 15-ft by 10-ft deep pit has been excavated near the center of the stripped area.	G. M. Exploration reports (written commun., 1990) 15 analyses: of 6 from the small pit, 5 detected gold ranging from 0.55 to 2.57 oz/ton gold; the five samples contained 0.45 to 6.74 oz/ton silver. Of five samples from outcrops within a 1,200-ft-radius of the stripped area, four samples contained 0.02 to 0.88 oz/ton gold and minor concentrations of chromium, copper, iron, lead, manganese, and zinc. The five samples contained from 0.12 to 4.54 oz/ton silver. Two analyses, one of an unheated split, and one of a heated split, each detected 0.55 oz/ton gold; the unheated sample contained 8.16 oz/ton silver, and a trace mercury; the heated sample contained 2.42 oz/ton silver, and no detected mercury. A bromine and a chlorine leach test recovered 0.05 oz/ton gold and 0.02 oz/ton platinum, and 0.06 oz/ton gold.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
					and 0.01 oz/ton platinum, respectively. The USBM collected two random chip samples from the pit (CTP-16 and CTP-17). They contained <5 ppb platinum, <2 ppb palladium, and <2 ppb gold.
151	Zoltec  Lee Reckling	0060712823 T15N R14E sec.04	The southernmost claims are on iron-oxide-stained quartz monzonite/granite within the East Mojave National Scenic Area. Carbonate rocks are on the north, although most of the area is partially covered with a thin veneer of colluvium.	One prospect pit. No production is known.	Two random samples were taken (CDC 179, 180). Ore grade analyses show 0.02% lead in sample 179. No resources have been delineated.
152	Piute mine	0060712280 T15N R14E sec.09	Hewett (1956, p. 155) reports that the mine is in a dolomitic unit of the Goodsprings Dolomite. At the surface, adjoining the main shaft, mineralization follows a N. 50° E. zone, dipping about 55° NW. Hewett reports galena, plumbojarosite, and siliceous limonite on the dump. A nearby adit is in quartz monzonite following a vein of quartz containing fluorite that strikes N. 70° W. and dips 46° N. The vein is at least 9 in. thick at the workings.	Wright and others (1953, table p. 82) report a 400 ft vertical shaft and 2,000 ft of workings. That is probably a different mine. Hewett (1956, p. 155) reports a 200 ft deep vertical shaft with some surface trenches. This description fits this property. Hewett (1956, p. 155) reports 1,245 tons of ore containing 15% lead with some copper and zinc mined between 1915 and 1917. He also reports a small shipment in 1919.	Two select samples were taken (CDC-181, 182). Ore grade analyses show 0.018 oz/ton gold, 0.33 oz/ton silver, 0.12% copper, 4% lead, and 1.05% zinc in sample 181, and 0.002 oz/ton gold, 1.12 oz/ton silver, 1.60% lead, and 0.02% zinc in sample 182. No resources have been delineated.
153	Unnamed prospect	0060712829 T15N R14E sec.09	Dolomitic rock has been sheared by N. 60° W., 30° SW. fault. The fault zone is filled with yellow and white calcareous gouge and rock fragments. Minor chalcopryite, copper oxides, and iron oxides associated with carbonate rocks were found on the dump.	An inclined shaft and a prospect pit. No production is known.	One 44 in. chip sample was taken across a fault (CDC-183). The sample contains 0.006 oz/ton gold, 0.11 oz/ton silver, 0.66% copper, 0.09% lead, and 0.02% zinc. No resources have been delineated.
154	Unnamed prospect	0060712828 T15N R14E sec.09	Limestone/dolomite is cut by a N. 30° W. vertical fault. Jasperoid and quartz with copper oxides, covellite, and chalcocite (?) fill the voids in the fault zone.	A caved shaft and two prospect pits. No production is reported.	One select sample was taken (CDC-186). The sample contains 0.005 oz/ton gold, 2.05 oz/ton silver, 9.52% copper, 0.10% lead, and 1.28% zinc. No resources have been delineated.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
155	Weef River	0060712824 T15N R14E sec.09	These claims overlie a contact between dolomite/limestone and quartz monzonite/granite. The intrusive contact is low angle with the granitic rock below the carbonate. Silicified carbonate and jasperoid are present at and above the contact along with much hematite. The carbonate is brecciated; possibly it is a low-angle fault contact.	Two adits and several prospect pits. No production is reported.	Two random samples were taken (CDC-184, 185). Ore grade analyses for gold, silver, copper, lead, and zinc have no significant values. No resources have been delineated.
156	Esparanza group (South Syenite group)	0060712825 T15N R14E sec.10	Dike swarms and alkaline intrusives are in Precambrian gneissic rock in parts of three sections (3, 10, 11) in this township. Carbonatite dikes in this area are commonly characterized by very high radioactivity.	Numerous small prospect pits around the area. No production has occurred.	Two select samples were taken (CDC-51, -52). The samples contain 7,200 ppm and 160 ppm cerium, 244 and 1 ppm europium, 52,600 and 59 ppm lanthanum, 6,360 and 15.3 ppm samarium, 117 and 1.3 ppm terbium, 26,300 and 127 ppm thorium, and 1,590 and 6.2 ppm uranium. No resources have been delineated.
157	Mineral Springs	0060712279 T15N R14E sec.02	The country rock is granite. Around the workings the granite is silicified and heavily limonite stained. The mineralization consists of galena, chalcopryite, sphalerite, and pyrite; with their secondary oxide products. Both northerly and westerly striking faults have been explored in the workings. Dips on the northerly striking structures are low angle (10°-35°); some are to the east and others to the west.	Four shafts, five adits, and numerous prospect pits and trenches. No production is recorded.	Three select samples were taken (CDC-53 to 55). The samples contain as much as 121 ppm silver, 39 to 8,100 ppm copper, and as much as >1% lead. No resources have been delineated.
158	Unnamed prospect	0060712827 T15N R14E sec.01	Garnetiferous gneiss is cut by a N. 10° E shear zone that dips 82° NW. and is exposed in workings for about 500 ft along strike. The shear zone is 5 to 6 ft wide where exposed and contains quartz veins that are up to 1 ft wide. Galena, cerussite, sphalerite, and iron oxides are present in the vein.	One shaft and nine prospect pits along a N. 10° E. trend. No production is known.	Two select samples were taken (CDC-49, 50). The samples contain 146 and 522 ppm molybdenum, 7 and 15 ppm silver, 1.25% and 3.39% zinc, and 0.24% and >1% lead. No resources have been delineated.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
159	Silverado-Tungstite (North)  Currently within Georgia Marble	0060713002 T15N R14E sec.07	A 7-ft-thick tactite zone strikes N. 20° E. and dips 60° W. West of the zone is the Teutonia Quartz Monzonite.	A 20-ft-long trench trends N. 20° E. into hillside, ending in a 3-ft-deep adit start; a small dump area extends 12 ft southwest for a total workings length of 35 ft.	A 3.5-ft-long chip sample (CTP-20) of epidote-rich endoskarn extends from the dolomite contact about one-half way across the tactite body exposed in the adit face, and contains 5 ppb gold, 3 ppm silver, and 34 ppm tungsten. A 10-ft-long chip sample (CTP-21) extends obliquely across a 3.5-ft thickness of garnet-rich exoskarn to the quartz monzonite contact, and contains 2 ppb gold, <2 ppm silver, and 67 ppm tungsten.
160	White Eagle (north)	0060712808 T15N R14E sec.08	In addition to quartz monzonite, a variety of rock types, all locally mineralized, underlie the northern and northwestern part of the White Eagle prospect. These rocks include dolostone, limestone, quartzite, and slate.	The White Eagle claim block covers about 23 mi <sup>2</sup> , including 8 mi <sup>2</sup> north and west of Striped Mountain and the southwest part of the Mescal Range. The block encompasses several old inactive prospects (and perhaps inadvertently some active claims). Inactive prospects covered include the unknown (Prospect Mountain quartzite prospect), the Pozzo, and the Slate quarry.	One sample, CTP-19, was taken at a prospect pit indicated by the map symbol, and contained 10 ppb gold, 850 ppm lead, 100 ppb mercury, and 410 ppm fluorine. Additional samples from the northern part of the claim block include samples from old inactive prospects within the block (see workings and production), and possibly mineralized samples from outlying areas of the claim block, including CTP-62, (Lat 35° 23' 16", Long 115° 33' 07") CTP-77 (Lat 35° 23' 40", Long 115° 34' 48") and CTP-79, -80, and -81 (Lat 35° 26' 08" Long 115 34' 21").
161	Unnamed prospect	0060712826 T15N R14E sec.09	The working explores a small jasperoid pod containing pyrite and iron oxides in dolomite.	One prospect pit was found. No production has occurred.	One select sample was taken (CDC-77). The sample contains 232 ppb gold, 3 ppm silver, and 0.18% zinc. No resources have been delineated.
162	Revenue Copper mine	0060711598 T15N R14E sec.09	The country rock is dolomite/limestone near a contact with quartz monzonite/granite. The contact strikes about N. 30° W. and dips 45° NE. A copper-bearing vein occurs along a porphyry intrusive in the limestone. The ore was copper carbonates and oxides, bornite, and chalcopyrite (Tucker and Sampson, 1943, p. 436).	A 70 ft deep shaft with levels at 40 and 70 ft, which were stoped; a 100 ft long crosscut tunnel that intersects the shaft at 20 ft (Tucker and Sampson, 1943, p. 436), and several prospect pits. Four cars of ore were shipped between 1917 and 1919 containing an average 25% copper, and \$7/ton in gold and silver (Tucker and Sampson, 1943, p. 436).	One select (CDC-78) and one random (CDC-76) sample were taken. The samples contain 2,080 and 32 ppb gold, 293 and <2 ppm silver, 0.51 and 0.019% zinc, and >1% copper. No resources have been delineated.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
163	New Trail mine (Cima, Johnson, Anchor, Colorado) Valgold-Mining and Milling	0060711253 T15N R14E sec.09	Ore is in skarn formed at and near the contact of quartz monzonite with the Goodsprings Dolomite. The skarn minerals include quartz, epidote, garnet, and muscovite with bornite and chalcopryrite which carry some gold and silver. Some of the copper minerals are altered to malachite. In addition, a shear zone containing blende, phlogopite, and magnesian mica has been reported by Hewett (1956, p. 141).	Descriptions of the main workings vary. Hewett (1956, p. 141) reported the Anchor shaft as being 185 ft deep with workings aggregating 2,500 ft in 1929. Wright and others (1953, p. 66) report the shaft is 300 ft deep and list 1,770 ft of drifts. A Bureau of Mines examination in 1950 described a 287 ft deep shaft (Anchor shaft) with levels at 100, 200 and 287 ft and a winze connecting the 200 and 287 levels with a total of about 1,500 ft of workings. A 100-ft-deep ore shoot was mined from a 200 ft deep shaft (Colorado shaft). Numerous pits, adits, cuts and two shallow shafts are also present. Supposedly the mine has been active intermittently since about 1870. The main production occurred between 1916 and 1919 when 2,500 tons of ore with a value of \$88,000 was produced. There was sporadic production between 1930 and 1957 according to U.S. Bureau of Mines records. Hewett (1956, p. 141) reports 199 oz gold, 6,824 oz silver, and 148,770 lb copper produced between 1929 and 1950. Tucker and Sampson (1943, p. 435) reported production of about \$100,000 before 1943, but the figures included the Revenue Copper mine. The ore averaged 0.207 oz gold, 8 oz silver and 14.26% copper per ton. Wright and others (1953, p.66) listed \$12,000 production between 1947 and 1951. The ore contained 7 oz/ton silver, 5.73 oz/ton gold, and 6.2% copper. Valgold Mining is attempting acid leach of copper-rich mine dumps in 1990.	Nine select (CDC-68 to -73, -79, -80, -82), three random (CDC-64, -65, -81), and one 5-ft chip (CDC-74) sample were taken. Sample -71 is a white dolomitic marble. The samples contain 3 to 51,700 ppb gold, as much as 368 ppm silver, as much as 13% zinc, and >1% copper. The marble is a dolomite containing 2.65% SiO <sub>2</sub> , 0.49% Fe <sub>2</sub> O <sub>3</sub> , 0.64% Al <sub>2</sub> O <sub>3</sub> , and minor amounts of the other major elements. A resource estimate of 8,000 tons of 5% copper was made (Tucker and Sampson, 1943, p. 435).



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
164	Bullion mine	0060710237 T15N R14E sec.15	This mine is in the Bonanza King-Nopah Formations (formerly Goodsprings Dolomite of Hewett, 1954). Bedding strikes N. 45° E. and dips 90° at the mine. Some faults on the property are parallel to bedding. The main working is on a fault that strikes N. 57° E. and dips 57° SE. Dolomite is brecciated; the matrix is silica. Goodwin (1957, p. 618) reports the ore was argentiferous cerussite in the oxidized zone, and galena plus chalcopryite in the sulfide zone. Also present are pyrite, copper oxides, and siderite.	Tucker and Sampson (1943, p. 475) reported a 150-ft-deep shaft. Goodwin, 1957, p. 618-619 reported a 200 ft shaft inclined 45° developed in 1917. An adit connects to a shaft and numerous prospect pits. The main working is an inclined open stope. Silver-lead carbonate ores were shipped to Wales in the 1860's and 1870's, but production was not recorded. About 250 tons of lead-copper-silver ore was mined in 1916-1917 (Tucker and Sampson, 1943, p. 475); average smelter recovery was 15% lead, 7.87% copper, 0.51 oz/ton silver, and 0.157 oz/ton gold (Goodwin, 1957, p. 618).	Six select (CDC-83, -84, -86, -88, -91, -92), three random (CDC-87, -89, -90), and one 1-ft chip (CDC-85) sample were taken. The samples contain as much as 1,040 ppb gold, 8.8 to 12,700 ppm arsenic, as much as 2,950 ppm silver, 180 to 30,900 ppm zinc, and >1% copper and lead. No resources have been delineated at this property.
165	White Eagle (south) Mining Property Development Corp	0060712808 T15N R14E sec.08	The country rock is quartz monzonite/granite that is heavily iron oxide stained. One shear zone strikes N. 36° W., and dips 50° SW. at the surface changing to 30° within 25 ft. Minor sericitic alteration is present along with pyrite, galena, magnetite, and pyrolusite in quartz veins.	A short inclined shaft, a large dozed area, and several prospect pits. No production is known.	Two select (CDC-176 and CTP-19), one random (CDC-177), and one 5-ft-chip (CDC-178) samples were taken at the workings. The samples contain as much as 0.004 oz/ton gold, 0.01 oz/ton silver, and 9.48% lead. No resources have been delineated.
166	Georgia Marble Georgia Marble Company	0060712480 T15N R14E sec.07	The Goodsprings dolomite on the property strikes north, dips west, and is intruded by Teutonia quartz monzonite. Most of the dolomite is massive and has a bleached-white appearance. Lesser unbleached zones and patches (equal to or greater than 20%) are dark blue-grey, with local 1/4- to 1/2-in. limonitic patches (equal to or greater than 3%) after sulfides.	Three stripped pit argas, each over 20,000 ft <sup>2</sup> , extend over a distance of 1,400 ft in a south to north direction from the top of a hill, which is an eastward extension of Striped Mountain.	Two samples were taken: a sample of white Goodsprings marble (CTP-17) was taken from stock piles in the central part of the development. A second sample of dark blue gray marble (CTP-18) was taken from the south pit near the hill top. These samples contained: 52.37% CaO, 0.48% MgO, 4.18% SiO <sub>2</sub> , 2.69% Al <sub>2</sub> O <sub>3</sub> , and 0.89% Fe <sub>2</sub> O <sub>3</sub> ; and 54.56% CaO, 0.54% MgO, 0.82% SiO <sub>2</sub> , 0.47% Al <sub>2</sub> O <sub>3</sub> , and 0.21% Fe <sub>2</sub> O <sub>3</sub> , respectively. About 50 million tons of inferred resource are present (John Cline, Georgia Marble Co., Kennesaw, GA). Limestone from the Striped Mountain area has been studied and sampled by Evans and others (1975).

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
167	Silverado-Tungstite J. Riley Bemby, Cima, CA	0060710381 T15N R14E sec.18	Silver- and scheelite-bearing tactite is exposed discontinuously along a north-south contact of Devonian Goodsprings Dolomite to the west, and Cretaceous Teutonia quartz monzonite. The contact, seen in between, and 50 ft east of two shafts, strikes N. 20° W., and dips 85° W. The prospect area is shown on geologic mapping by Evans and others, 1975.	Two shafts (one 23-ft deep and a second 30-ft deep with a headframe, about 250 ft N. 20° W. of the first) and more than a half dozen trenches, adit starts, and small pits (aligned north-south) occur in section 18. These are mainly in silicified and iron-oxide-stained dolomite. A 100 ft by 500 ft trench in tactite is at the north end of the claim group in section 7. Wright and others (19__, p. 152) report a small tonnage of silver ore was shipped prior to 1900. A 15-ft-deep shaft start occurs 250 ft northeast of the second shaft; an open pit, 25 ft in diameter, is 25 ft east of the shaft start.	Four samples (CTP 4-6 and CTP 25) were taken of limonitic quartz-veined silicified carbonate. A grab sample (CTP 4) from a small stockpile at the north end of a 40-ft trench, extending from the 23-ft shaft contained 3,210 ppb gold, 277 ppm silver, 265 ppm copper, 0.38% lead, 1.21% zinc, and 133 ppm tungsten. A sample (CTP 5) from a small stockpile 6 ft southeast of the 30-ft deep shaft contained 1,760 ppb gold, 582 ppm silver, 650 ppm copper, 2,750 ppm lead, 6,300 ppm zinc, and 27 ppm tungsten. A grab sample at a 10-ft adit start (CTO 6), 700 ft south of the 23-ft shaft, 110 ppb gold, 3 ppm silver, 29 ppm copper, 36 ppm lead, 210 ppm zinc, and 177 ppm tungsten. A fourth random chip sample (CTP 2) of tactite taken between the northeast shaft start and open pit contained 37 ppb gold, 5 ppm silver, 1,900 ppm copper, 30 ppm lead, 12,000 ppm zinc, and 16 ppm tungsten. Calculation of resources will require additional sampling, mapping, and perhaps diamond drilling.
168	Unknown (Slate prospect) Unknown; currently within White Eagle	0060713000 T15N R13E sec.14	Light greenish-gray phyllitic slate, about 50% of which is iron-oxide-stained; slaty facies of the Pioche Shale. Slate cleaves into plates, commonly less than 1/4 in. thick.	One 15 ft by 20 ft, by 5-ft-deep pit.	One sample (CTP-44) analyzed for major element oxides contained 54.14% SiO <sub>2</sub> , 21.02% Al <sub>2</sub> O <sub>3</sub> , 7.42% Fe <sub>2</sub> O <sub>3</sub> , 2.20% MgO, 1.32% CaO, 0.53% Na <sub>2</sub> O, and 6.40% K <sub>2</sub> O.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
169	Unknown (prospect in quartzite) Unknown; cur. within Wh Eagle	0060712999 T15N R13E sec.14	Malachite staining indicative of copper mineralization occurs within Prospect Mountain Quartzite of Cambrian or late Precambrian age, which strikes N. 12° E. and dips 57° W. Mineralization is most apparent within or near a 1- to 5-ft-thick argillaceous facies now locally metamorphosed to a hornblende quartz gneiss.	Three shaft-starts: the northern shaft is 12 ft deep with 15 ft of 5-ft-wide trench extending N. 20° E. from the start; a second 16-ft-deep shaft is 35 ft S. 55° E. of the first; and a third 6-ft-deep shaft start is 20 ft S. 30° W. of the center shaft.	Three samples were taken: a chip sample (CTP 22) across a fault zone on the north wall of the south shaft start contained 8 ppb gold, <2 ppm silver, and 310 ppm copper. A chip sample (CTP-23) across gneissosity in quartzite from the south shaft contained 33 ppb gold, 5 ppm silver, and 0.46% copper. A select dump sample (CTP-2) was taken from the northern shaft and contained <2 ppb gold, 3 ppm silver, and 420 ppm copper. No resources were identified.
170	Pozzo Cur. within Wh Eagle; 1929-A.St	0060711205 T15N R13E sec.13	Weak mineralization occurs within and near the Mesquite and Pioche thrust faults within mylonite, in hanging wall Pioche Shale, and in younger Monte Christo Limestone (Bullion member) that makes up the footwall and a thrust slice between splays. Thrust splays are best exposed at an inclined shaft and strike N. 60° E., and dip 53° NW., concordant with bedding.	A shaft inclined about 55° to the northwest between two splays of thrust fault zones encompassing a limestone thrust slice extends to a depth of about 25 ft. A 150-ft-long, N. 50° E. trending side-hill cut in Pioche Shale is 400 ft north of the inclined shaft. A second 12-ft-deep shaft is 375 ft S. 80° E. of the first shaft in weakly iron-oxidized limestone. Several small additional pits are probably at the site, but were not visited. Minor production of gold, silver, copper, and lead occurred in 1927.	Four samples were taken (CTP 40-43). A dump (from the inclined shaft) sample of mylonitized limestone and lesser quartz, locally with malachite stains (CTP-40) contained 3 ppb gold, 3 ppm silver, and 58 ppm copper. A grab sample (CTP-41) of iron-stained cherty sandstone facies within the Pioche Shale, taken from the 150-ft-long cut, contained <2 ppb gold, 3 ppm silver, and 60 ppm copper; a second trench sample (CTP-42) of black and brown slate contained <2 ppb gold, <2 ppm silver, and 170 ppm zinc. A sample of iron-oxidized limestone (CTP-43) from the 12-ft shaft contained 35 ppm gold, <2 ppm silver, and 95 ppm lead.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
171	Express mine  Inactive Unpatented Prospect	0060711171 T15N R13E sec.13	Limonite- and hematite- stained, strata-bound and stratiform zone (strike N. 20° W, dip 64° E.) occurs within the Goodsprings Dolomite within brecciated white carbonate rock directly, to a few feet above a dark blue-grey facies; the deposit may represent the same stratigraphic horizon as similar deposits at the Iron Horse, Lead Lady, and Blue Buzzard mines. The thin bedded limonitic chert facies, represents an early phase of metal concentration, probably penecontemporaneous with chert deposition or early diagenetic recrystallization. Hematitic material appears to represent later oxidation associated with a weathering event accompanied by silica leaching.	The main working appears to be a stoped inclined shaft now largely caved and represented by 50-ft of 15-ft-deep trench with an overhanging of hanging wall and over 3,000 ft <sup>2</sup> of limonitic and hematitic cherty dump material several ft thick. Production totaled about 570 tons of ore by Messrs. Conway and Smith (1917) and C. A. Haussel (1918), all of Cima, CA. Copper and silver were mainly recovered with minor gold.	The Bureau of Mines took two samples: a 3- ft chip sample (CTP-38) across beds of limonitic chert contained 15 ppb gold, <2 ppm silver, 42 ppm copper, 5.9% iron, 52 ppm lead, and 190 ppm zinc. A grab sample (CTP-39) of hematitic dump material contained <13 ppb gold, 4 ppm silver, 114 ppm copper, 8.0% iron, 24 ppm lead, and 180 ppm zinc. Resource determination will require further work, possibly including drilling.
172	Cima Limestone deposit  Georgia Marble Company	0060710447 T15N R14E sec.18	A very large deposit of carbonate rock constitutes most of Striped Mountain, which is made up of four carbonate formations represented by ten distinct facies or members. These carbonate rocks range in age from Upper Cambrian to Lower Permian, and have been mapped, described, and classified by Evans and others, 1975.	The deposit is undeveloped. One small pit was found, but two or three more may occur based on mapping by Evans and others, 1975; no significant production is evident.	Evans and others, 1975, present chemical data - 70 carbonate samples, 36 collected for their study, and 34 collected during other studies, including 16 samples representing 4,700 ft of continuous chip samples taken (from) the Union Pacific Railroad. The Bureau of Mines collected four random chip samples (CTP 26-29), including a sample of the Upper Devonian Crystal Pass member of the Sultan Limestone, and one sample each of the Dawn, Anchor, and Bullion members of the Mississippian Monte Cristo Limestone; whole rock analyses of these samples are reported in table A-3. Actual resource tonnage estimates have not been reported but resources are vast.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
173	Standard No. 1 mine (Bluegrass, Riley, Excelsior)	0060710376 T15N R14E sec.18	The mine is in the Goodsprings Dolomite and possibly lies on the Mescal thrust fault. Mineralization consists of copper oxides and scheelite at the surface. Westman (1968, p. 84) describes massive magnetite with chalcopryrite in underground workings. Several steep faults were intersected by workings with gouge and jasperoid-chalcedony fillings. Some skarn minerals were reported. Contact with granite is east of the surface workings. A small section of granite was intersected in underground workings, but apparently the main granite body was not encountered.	The main shaft is about 400 ft deep with levels at 100, 200, and 250 ft. No stations below this level were completed. More than 940 ft of drifts and a large stope are on the 100 level, over 400 ft of drifts with 180 ft of raises and a 40 ft winze on the 200 level, a 59 ft drift on the 250 level, and a station set was installed at the 300 level (Westman, 1968, p. 80-19). Two large open cuts are near the main shaft, several shallow shafts, and numerous prospect pits on the Bluegrass and Open Door claims which make up the Standard No. 1 property. Significant, but unreported copper was mined prior to 1902 from the Excelsior mine. The Standard No. 1 produced about \$75,000 of copper-gold-silver ore from 1902 to 1908 (Wright, 1953, p. 151). Some tungsten may have been mined, but is not reported.	Three select samples were taken (CDC-173 to 175). The samples contain as much as 0.023 oz/ton gold, 0.91 to 4.50 oz/ton silver, 0.42 to 7.08% copper, as much as 1.19% lead, and 0.10 to 0.27% zinc. No resources have been delineated.
174	Levi No. 1	0060712807 T15N R14E sec.20	The country rock is quartz monzonite that is locally sericitically altered and silicified. A quartz vein strikes N. 80° W., and dips 62° S. Minor pyrite is disseminated in the rock and pyrolusite dendrites coat fractures.	Two prospect pits. No production is known.	One random sample was taken (CDC-172) containing 0.20 oz/ton silver, 0.44% lead, and 0.02% zinc. No resources have been delineated.
175	New Trail Magnesite deposit	0060710470 T15N R14E sec.15	Veins of white magnesite in dolomite outcrop near the intersection of Oro Wash and New Trail Canyon. The two main veins are up to 4 ft thick, subparallel, and trend N. 63° W., dipping 43° SW. These veins have been mined to an unknown depth and the exposed ends of the veins are mostly less than 2 ft thick. The magnesite is brecciated and cemented. Both earthy and dense magnesite are present in outcrop. Two other veins are up to 8 in. thick and intersect. Their strikes and dips are N. 30° E., 65° SE; and N. 20° W., 70° NE. The contact with granitic rocks is close to these veins.	An adit, two open stoped sections of vein (one reported by Wright and others, 1953, p. 184) as being 80 ft deep, and several prospect pits. Production is listed as several hundred tons in 1918 and the early 1930's (Wright and others, 1953, p. 184).	Two select (CDC-62, -75) and two chip (CDC-66, -67) samples of 11 and 28 in., respectively, were taken. The samples contain 36.31% to 45.05% MgO, 2.17% to 11.43% CaO, <0.36% Fe <sub>2</sub> O <sub>3</sub> , and 1.10% to 4.64% SiO <sub>2</sub> . No resources have been delineated.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
176	Vega	0060712822 T15N R14E sec.15	The country rock is limestone/dolomite containing scattered skarn bodies. The skarn is predominantly epidote-garnet with some areas containing books of coarse green mica (sheets up to 2 in. diameter). Contact with dioritic to granitic rocks is nearby. The skarn contains magnetite, hematite, chalcopryite, copper oxides, barite, and possibly chalcocite.	Five shafts (mostly 20 to 30 ft deep) and several prospect pits. No production is known.	Seven select samples were taken (CDC-56 to -61, -63). The samples contain 12 to 2,040 ppb gold, 6 to 1,080 ppm silver, 640 to 3,900 ppm zinc, >1% copper, and 4 to 1,350 ppm lead. Sample -57 contains 900 ppm tin and 293 ppm tungsten. Sample -61 is massive barite from a dump. No resources have been delineated.
177	Allured Copper mine (Hillside mine, Oxide, Cuprite)	0060710424 T15N R14E sec.22	Three main claims which are grouped under this name. The Oxide property is in altered dolomite at the contact with quartz monzonite. Limonite along this contact probably resulted from alteration of magnetite. The dolomite has been altered to diopside, garnet, vesuvianite, serpentine skarn containing some malachite (Hewett, 1956, p. 141). The Hillside claim is at the contact between dolomite, quartzite, and granitic gneiss (Wright and others, 1953, p. 61). Chalcopryite, copper oxides, sphalerite, pyrite, arsenopyrite (?), diopside, tremolite (?), and quartz occur in a fault zone which strikes north and dips 90°. An iron skarn with much silica is on the Cuprite claim which is at the contact of limestone and granite. A small amount of copper oxides on the dump are associated with siliceous iron oxides.	Eight shafts are on the various claims. A 135 to 150 ft deep shaft is inclined 55° to 65° W. has about 200 ft of drifts and 30 ft of crosscuts (Wright and others, 1953, p. 61 and Meade, 1937, unpublished report). A 35 ft shaft with 40 ft of drifts, several tunnels, shallow shafts, and prospect pits is within an area about 1500 ft in diameter. On the Hillside claim, the workings open into a stope estimated to be 40 ft long by 15 ft wide by 20 ft high (Wright and others, 1953, p. 61). Unpublished Bureau of Mines reports lists 38 carloads of ore, but metals, grade, and how much from which mine is not known. Five tons of hand picked ore averaging 26% copper was produced (unpublished DMA report, 1951). Wright and others (1953, p. 61) report two carloads containing 6% copper with some gold and silver from the Hillside claim and one carload of 8% copper and \$6 or more in gold and silver from the Oxide workings in 1947. An undated and unsigned report lists the following ore shipments to Garfield Smelting, Utah: Carbonate ores: Car No. 1, 25.2% copper, 0.12 oz gold, 4.02 oz silver; Car No. 2, 26.5% copper, 0.13 oz gold, 3.87 oz silver; Car No. 3, 26.5% copper, 0.16 oz gold, 4.54 oz silver; in 5 to 10 ton shipments. From the	Six select (CDC-40 to -44, -46) and one random (CDC-45) sample were taken. The samples contain as much as 5,100 ppb gold, 2 to 762 ppm silver, as much as 1,010 ppm tungsten, 190 to 42,700 ppm zinc, and over 1% copper and lead. In 1947 there were 3,500 tons of measured and 5,000 tons inferred 2% copper ore, and 350 tons indicated and 150 tons inferred 10% zinc ore (unpublished War Minerals Examination).

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
				Hillside claim Base ores: Car No. 4, 5.82% copper, 0.12 oz gold, 4.06 oz silver; Car No. 5, 6.2% copper, 0.05 oz gold, 4.54 oz silver in 35 ton cars.	
178	Morning Star mine Vanderbilt Gold Corporation	0060710148 T15N R14E sec.28	This mine is in the Ivanpah Granite. Mineralization is in the hanging wall of the Morning Star fault which has been described as a thrust fault by Hewett (1956) and an oblique right-lateral strike-slip fault by Byington and others (1989). The alteration is weak argillic with or without sericitic alteration. Base and precious metal mineralization is associated with quartz (with or without calcite), occurring both as cement in stockwork and as veins subparallel to the Morning Star fault. Two stages of mineralization have been described by Sheets and others (1989, p. 224-226). The first stage contains quartz, calcite, pyrite, hematite, chalcopryite, galena, sphalerite, silver-bearing tetrahedrite, and electrum. The second stage contains pyrite, covellite, digenite ( $\text{Cu}_3\text{S}_5$ ), hematite, acanthite, uytenbogaardtite, native bismuth, and electrum.	The mine began as an underground operation after discovery in 1907. By 1943, the mine had a 600 ft tunnel with over 1,300 ft of drifts and two winzes (240 and 420 ft deep) (Tucker and Sampson, 1943, p. 304). The mine was turned into an open-pit operation in 1986 by Vanderbilt Gold Corporation (Sheets and others, 1989, p. 220). Extensive underground development and calculation of reserves occurred prior to World War II and also between 1980 and 1982 (Tucker and Sampson, 1930, p. 305 and 1943, p. 456; Sheets and others, 1989, p. 220). According to a company report to shareholders, an estimated 44,035 oz of gold has been produced.	Four select (CDC-21 and CTP-67 to -69), four random (CDC-18, -20, -27, -31), and one 34 in. chip (CDC-19) sample were taken. The samples contain 6 to 9,230 ppb gold, as much as 11 ppm silver, and 24 to 2,840 ppm lead. About 8 million tons of 0.06 oz/ton gold reserves are at the Morning Star mine (1988-89 E&M Mining Directory, p. 139; Sheets and others, 1989, p. 220).
179	Patrick Henry Fred Neuberger	0060712635 T15N R14E sec.28	Several workings explore a shear zone at least 6 ft wide, strikes N. 15°-25° W. and dips 55° SW. in quartz monzonite/granite. Near the fault, in the hanging wall, a small amount of copper oxides coats fractures. Weak argillic alteration is present locally.	One adit, two shafts and five prospect pits are on the claim. No production is reported.	One select (CDC-39) and two chip (CDC-37, -38) samples were taken. The chip samples were 5.7 and 4.5 ft long, respectively. The samples contained 58 to 9,710 ppb gold, as much as 15 ppm silver, and as much as >1% lead. No resources have been delineated.
180	Sunnyside mine (G.G. mine) Fred Neuberger	0060712282 T15N R14E sec.28	The main working is on a schistose or gneissic zone within the Teutonia Quartz Monzonite. Gold occurs in quartz veins within "talca seams" that follows a north striking, 35° W. dipping fault (S. L. Pearce, unpublished and undated private report). This may be a thrust fault that is subparallel and related to the Morning Star thrust fault.	The main working is a 360 ft inclined shaft with crosscuts at the 50 ft (12 ft long), 100 ft (20 ft long), 150 ft (25 ft long), and 350 ft (60 ft long) levels. About 600 ft west is a 126 ft deep shaft. Several prospect pits are also present on the property (S. L. Pearce, unpublished and undated private report). No record of production is known.	Two select (CDC-29, -30) and one random (CDC-32) samples were taken. The samples contain 38 to 2,350 ppb gold, and as much as 34 ppm silver. No resources have been delineated on this property.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
181	George Washington Fred Neuberger	0060712631 T15N R14E sec.28	Silicified, sericitically altered granite contains minor copper oxides. Iron oxides permeate the granite.	Four prospect pits are within 100 ft of each other. No production has occurred.	One select sample was taken (CDC-28). The sample contains 2,290 ppb gold, 33 ppm silver, and 0.22% copper. No resources have been delineated.
182	Buena Vista group (May, June, July) Fred Neuberger	0060712833 T15N R14E sec.20	Several workings explore a N. 10° W. breccia zone that dips 30°-35° E. and is up to 4 ft thick. The breccia is cemented by quartz and contains clasts of sandstone as well as quartz monzonite. Also present is pyrite and/or marcasite, copper oxides, galena, calcite, manganese dioxide, hematite, jarosite, and limonite. In close proximity and parallel to the breccia zone is a diabase dike. The predominant rock type is quartz monzonite.	Two adits and several prospect pits. No production has been reported.	Four select samples were taken (CDC-33 to -36). The samples contain 4,730 to 30,200 ppb gold, 3 to 467 ppm silver, up to 16.6% zinc, and as much as >1% copper and lead. No resources have been delineated.
183	Bessie Dean Rowsell	0060712816 T15N R14E sec.20	A N. 10° E. striking, 46° SE. dipping fault is in quartz monzonite. Minor limonite is present.	An inclined shaft (50°) and a few prospect pits. No production is known.	One 30-in. chip sample (CDC-171) was taken across a fault. It contains 0.006 oz/ton gold, 0.05 oz/ton silver, 0.03% copper, 0.15% lead, and 0.10% zinc. No resources have been delineated.
184	New Era No. 3 mine Fred Neuberger	0060710150 T15N R14E sec.20	Veins of gold-bearing quartz are hosted by the Teutonia Quartz Monzonite. The gold is associated with massive pyrite in a N. 5° E. striking, 72° SE. dipping fault zone. Also present is a N. 75° W striking, 64° SW. dipping shear zone located north of the main adit. The quartz monzonite is sericitically altered in places and silicified. Dark brown jasperoid occurs in some workings.	Two adits, one of which has at least one winze, an inclined shaft (-30°), a trench, and several prospect pits. Some gold was probably produced, but it either was not reported or was combined with that from the New Era No. 1 and 2 claims.	Three select (CDC-167, 169, 170) and two chip (CDC-166, 168) samples were taken. The chip samples were 30 and 28 in., respectively. The samples contain as much as 0.061 oz/ton gold and 0.01 to 0.10 oz/ton silver. No resources have been delineated.
185	New Era No. 1 - 2 mine	0060712813 T15N R14E sec.29	Gold occurs in a quartz stockwork within the Teutonia Quartz Monzonite. The quartz vein network strikes about north and dips steeply to the east. Minor amounts of copper oxides and pyrite were found on the dump with associated iron oxides.	One shaft, reported to be 150 ft deep with levels at 50, 80, and 150 ft totalling several hundred ft (Wright and others, 1953, p. 76). Also a large trenched area and several prospect pits. Wright and others (1953, p. 76) report \$14,000 gold production prior to 1914.	Two select samples were taken (CDC-157, -158). The samples contain 1,480 and 210 ppb gold, 18 and 5 ppm silver, 1,700 and 130 ppm zinc, respectively. No resources have been delineated.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
186	Ginn mine	0060712482 T15N R14E sec.29	The country rock is quartz monzonite/granite which has been fractured and sericitically altered in places. At least one basic dike which strikes N. 20° E., and dips 44° E is in the area. The workings are on the Ginn thrust fault (Thompson, 1978, p. 42-43) which strikes northerly and generally dips between 30° and 60° E. Mineralization introduced galena, sphalerite, pyrite, and chalcopryrite amounts. Manganese dioxide and iron oxides coats most of the granitic rocks.	Three adits and numerous prospect pits. Gardner (1948) reported production from the Ginn and Hansen diggings in 1927 of 18,188 lb containing 0.052 oz gold, 21.6 oz silver, 27.8% lead, and 2.7 oz zinc. The Hansen diggings are reported on the Standard No. 2 mine property (Map No. 190) in this study.	Three select (CDC-161, 163, 165) and two random (CDC-162, 164) samples were taken. The samples contain as much as 0.198 oz/ton gold, 0.67 oz/ton silver, 0.14% copper, 2.75% lead, and 1.49% zinc. No resources have been delineated.
187	Unnamed prospect	0060712812 T15N R14E sec.30	Quartz monzonite/granite is cut by a basic dike that strikes N. 28° W. and dips 30° SW. Also an associated quartz vein 1 to 2 ft thick contains pyrite, marcasite (?), and iron oxides. Another quartz vein striking N. 40° E., and dipping 36° SE. has the same sulfide mineralogy.	An inclined shaft, a vertical shaft, an adit, and a few prospect pits. No production is reported.	Two select samples (CDC-159, -160) were taken. The samples contained 635 and 11,100 ppb gold and 5 ppm silver. No resources have been delineated.
188	Unnamed prospect	0060712811 T15N R14E sec.30	Quartz monzonite/granite is heavily stained with iron oxides and slightly silicified. A small xenolith of carbonate rock has been altered to a garnet-epidote skarn.	Two small prospect pits. No production is known.	Two random samples were taken (CDC-155, -156). Sample -156 has 24 ppm silver, 950 ppm tin, and 2.14% zinc. No resources have been delineated.
189	West End claim Fred Neuberger	0060712815 T15N R14E sec.19	The country rock is limonite coated quartz monzonite with minor silicification near a quartz vein. The quartz vein is in a N. 40° W. striking, vertically dipping shear. Most of the area is covered with a thin layer of colluvium.	One 6 ft deep prospect pit in rock and several small pits is in colluvium. There has been no production.	One 18-in. chip sample was taken across the shear zone (CDC-148). No significant values were noted. No resources have been delineated.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
190	Standard No. 2 mine Dean Rowsell	0060710050 T15N R14E sec.19	<p>The deposit is in the Goodsprings Dolomite near the contact with the Teutonia Quartz Monzonite. Much of the dolomite is bleached to a brilliant white and locally may be dedolomitized. Skarn mineralization is at and near the intrusive contact. Mineralization is associated with alteration zones near basic dikes in brecciated limestone (Wright and others, 1953, p. 68). Hewett (1956, p. 139) reported that mining explored the contact zone, which is about 10 ft wide, between quartz monzonite and dolomite. Underground workings, examined during this investigation, show the exploration and stope occurred along a north striking fault zone with a near vertical dip. Chrysocolla is the only ore mineral noted at the main shaft. Sphalerite, galena, and their oxidation products are present in some workings.</p>	<p>The main shaft is 275 ft deep inclined 74° W. with over 450 ft of underground workings. One stope area is 50 ft long by 4 ft wide by 15 ft high. Varying descriptions are provided by Wright and others (1953, p. 68) and Hewett (1956, p. 139). The best and most complete descriptions are provided by Westman (1968, p. 96-108). Included with this property are the Geer shaft, Hansen diggings, Ross claims, Johnny shaft and adit, and Gallagher shaft area. Numerous shafts, prospect pits and adits are on the Standard No. 2 claim group. About 1906, four carloads of 22% copper ore were shipped (Hewett, 1956, p. 139). Between 1917 and 1919 some copper ore and between 1934 and 1935 some lead-copper ore were shipped. One shipment assayed 13% copper, \$8 (0.39 oz/ton) gold and 16 oz/ton silver (Wright and others, 1953, p. 68). U.S. Bureau of Mines production records show 22.8 oz gold, 197 oz silver, 3,530 lb copper, and 4,037 lb lead produced in 1934-35; and 7 oz silver and 418 lb copper in 1956. Westman (1968, p. 99) reported 15 tons of ore from the Geer shaft averaged 0.3 oz gold, 3.04 oz silver, and 18.75% copper. Don Gardner (1948) reported production of two shipments, one from the Ginn &amp; Hansen diggings in 1927 (18,188 lb) and the other from the Hansen in 1934 (11,426 lb) of 0.052 oz gold, 21.6 oz silver 27.8% lead, 2.7% zinc; and 0.045 oz gold, 26 oz silver, and 32% lead, respectively. Some ore could possibly have come from the Gallagher shaft area.</p>	<p>Nine select (CDC-141 to -144, -146, -147, -149, -150, -154) samples of mineralized rock and one random (CDC-145) sample of white dolomitic limestone were taken. The samples contained 40 to 6,230 ppb gold, 8 to 528 ppm silver, as much as 11.1% zinc, as much as &gt;1% copper and lead. The carbonate has 5.88% MgO and 47.47% CaO. No resources have been delineated.</p>



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
191	Geer dolomite quarry Dean Rowsell	0060712814 T15N R14E sec.30	The area is underlain by white dolomitic marble of the Bird Springs Formation (Thompson, 1978, plate 1). The marble contains minor thin brown irregular stringers and small amounts of manganese dioxide.	One large cut about 75 ft long by 25 ft wide by 12 ft high near the top of a ridge. No production has been reported, but it appears that up to 100 tons of marble may have been removed.	One random sample was taken (CDC-153). The dolomite contains 1.1% SiO <sub>2</sub> and 0.28% Fe <sub>2</sub> O <sub>3</sub> . No resources have been delineated, but a careful mapping and sampling program should be able to define resources.
192	Suzanne R. mine	0060712485 T15N R13E sec.25	The country rock is white dolomite of the Bird Springs Formation. Veins of epidote-garnet skarn contain magnetite, chalcopyrite, copper oxides, covellite, chalcocite, scheelite, and possibly cassiterite at the main workings. Nearby workings that are considered part of this property in this report contain sphalerite, galena, and cerussite. The main skarn body appears to be elongate in a N. 25° E. direction and dips about 74° NW.	Four shafts, two adits, and numerous prospect pits. Thompson (1978, p. 106-107) reports 30 tons of copper ore mined in the spring of 1945.	Four select samples were taken (CDC-137 to -140). Sample -137 is a whole rock. The samples contain 77 to 1,380 ppb gold, 120 to 140 ppm silver, 18 to 1,760 ppm tungsten, as much as 4.2% zinc, and as much as >1% copper and lead. The dolomite contains almost 120% SiO <sub>2</sub> . No resources have been delineated.
193	Evening Star Tin mine (Bernice, Maynard, Rex, Cima)	0060710358 T15N R13E sec.25	The Evening Star Tin mine is within dolomitic limestone and dolomite, some of which is converted to marble, of the Bird Springs Formation. Fine graphite is on some bedding planes. In close proximity to the mine is the Teutonia Quartz Monzonite. The rock varies from quartz monzonite to alaskite in composition. Skarn bodies occur at or near the contact between the carbonate and intrusive. Near the mine, the dominant skarn mineral is epidote, with minor garnet and calcite. South of the mine garnet is dominant and magnetite is also present. In the ore zone the major gangue minerals are dolomite and calcite, with lesser amounts of talc, serpentine, tremolite, forsterite, brucite, andesine, quartz, and calamine. Ore minerals identified include cassiterite, chalcopyrite, sphalerite, magnetite, hematite, pyrite, pyrrhotite, arsenopyrite, chalcocite, digenite, covellite, tenorite, limonite, scheelite, chrysocolla, and malachite. Most of this information and more detailed descriptions of the mine area are in Thompson (1978).	The No. 1 shaft is 34 ft deep, has a 35 ft drift, and had a 55 ft winze which is now backfilled. The No. 2 shaft is 100 ft deep and has about 170 ft of drifts and a 6 ft winze (Thompson, 1978, p. 61-64). A 67-ft deep shaft is located about 400 ft west of the No. 2 shaft (Wright and others, 1953, p. 147). Two open cuts and numerous prospect pits are in the area. Hewett (1956, p. 157) reports 3,200 lb tin production.	Three select (CDC-132 to -134) and three random (CDC-131, -135, -136) samples were taken. Samples -131, -135 and -136 were white dolomite. The samples contain 26 to 790 ppb gold, as much as 150 ppm silver, 970 to 5,300 ppm tin, 73 to 2,150 ppm tungsten, 730 to 3,900 ppm zinc, and as much as >1% copper. The dolomite contains <0.24% Fe <sub>2</sub> O <sub>3</sub> , <4.32% SiO <sub>2</sub> , and negligible amounts of other major elements.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
194	Hartmann Tungsten mine	0060712486 T15N R13E sec.25	The country rock is carbonate units of the Bird Springs Formation which lie near and west of the Teutonia Quartz Monzonite. Mineralization, occurring in bodies of epidote-garnet skarn, consists of magnetite, iron oxides, scheelite, sphalerite, chalcopyrite, and copper oxides. Quartz, calcite, serpentine/talc, and asbestos are also present. The carbonate is mostly white dolomitic marble that may be de-dolomitized near the skarn bodies. The skarn bodies are commonly small (less than 10 ft diameter) and are not connected. Their location and size may be a function of intensity of brecciation of the dolomite due to faulting.	Three adits, two shafts, and numerous prospect pits. Thompson (1978, p. 107) reports more than 85 short ton units of tungsten produced in 1941.	Four select (CDC-125, -126, -127, -129) and two random (CDC-123, -124) samples of mineralized rock and two random (CDC-128, -130) samples of dolomite were taken. The samples contained as much as 1,800 ppb gold, as much as 292 ppm silver, as much as 4,400 ppm tin, 4 to 1,850 ppm tungsten, as much as 1.06% zinc, as much as >1% copper. The dolomite contains less than 0.31% Fe <sub>2</sub> O <sub>3</sub> . No resources have been delineated.
195	Copper King mine (Rex mine)	0060710428 T15N R13E sec.25	The deposit is a skarn formed at the contact of the Teutonia Quartz Monzonite with a dolomite. The dolomite is bleached near the contact with veinlets of serpentine and contains magnetite and epidote. Also present in the dolomite are quartz, magnesite, garnet, malachite, and chrysocolla. The underlying quartz monzonite contains a high percentage of biotite near the dolomite contact.	The main shaft is reported to be 100 ft deep (Hewett, 1956, p. 139), 225 ft deep (Wright and others, 1953, p. 63), and 640 ft deep (Westman, 1968, p. 110). The size of the dump indicates that 640 ft of total workings may be the most accurate shaft depth. The shaft is caved and filled with timbers at the surface. The mine produced 2,080 lb copper, 120 oz silver, and 0.8 oz gold in 1909 (Hewett, 1956, p. 139).	Two select (CDC-117, -151), four random (CDC-118 to -121), and two chip (CDC-122, -152) samples were taken. CDC-120 and -121 were whole rock dolomite samples. The chip samples were 2 and 3.5 ft long, respectively. The samples contain as much as 387 ppb gold, as much as 75 ppm silver, as much as 1,500 ppm zinc, and as much as 710,000 ppm copper. Sample CDC-120 is a dolomite and CDC-121 is a limestone with <0.04% Fe <sub>2</sub> O <sub>3</sub> . No resources have been delineated for this property.
196	Lucky Find	0060712487 T14N R13E sec.25	The workings explore magnetite-rich skarn bodies in limestone/dolomite of the Bird Springs Formation. Copper oxides along with epidote and garnet are commonly associated with the skarn bodies that outcrop around the property. Granitic rock, some containing minor disseminated copper oxides, crops out near and to the east of the main workings.	Two shafts, one adit, and numerous prospect pits are on this property. No records of production are under this name, but some copper ore probably was mined from this property (Westman, 1968, p. 111).	Five select (CDC-109, -111, -114-116) and two random (CDC-110, -113) samples were taken. Sample -116 is a white marble. The samples contain as much as 200 ppb gold, as much as 229 ppm silver, and as much as 210,000 ppm copper. No resources were delineated.
197	Gold Button	0060712820 T15N R14E sec.31	The country rock is limonite stained quartz monzonite/granite. Two minor shear zones were explored; one striking N. 50° W., dipping 84° SW. and the other striking N. 85° E., dipping 45° S. Minor galena and quartz occur in the easterly	One shaft and several prospect pits and dozer scrapings. No production has occurred.	Three random (CDC-97, -98, -100) and one select (CDC-99) sample were taken. The samples contain as much as 12 ppb gold, as much as 7 ppm silver, and as much as 0.81% lead. No resources have been delineated.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
			striking shear.		
198	Sunset	0060712810 T15N R14E sec.30	This area is underlain by the Teutonia Quartz Monzonite which is highly stained with limonite, locally faulted, fractured, and sericitically altered. At one shaft, copper oxides and quartz are on the dump. Locally, propylitic alteration and minor shearing is present.	Two shafts, an adit, and several prospect pits. No production is known production from this property.	Two select (CDC-105, -106) and two random (CDC-107, -108) samples were taken. The samples contain 3 to 7,040 ppb gold, as much as 36 ppm silver, 460 to 13,300 ppm zinc, as much as 1,300 ppm copper and as much as >1% lead. No resources have been delineated.
199	MP	0060712809 T15N R14E sec.30	The working is in quartz monzonite/granite that is limonite stained with minor specular hematite and pyrolusite.	One inclined (60°) shaft which may have a drift at the bottom. No production is recorded.	One random sample was taken (CDC-104). It contains 10 ppm silver and 9,800 ppm zinc. No resources have been delineated.
200	Betty Jane	0060712819 T15N R14E sec.30	Quartz monzonite with N. 45° W., 85° SW. quartz vein has been propylitically altered adjoining the vein. Minor copper oxides and pyrite are associated with the veining at the claim discovery. Also a large xenolith of calcareous rock has been altered to a magnetite-rich skarn containing sphalerite, cerussite, copper oxides, and possibly chalcocite.	Two prospect pits. No production is known.	Two select (CDC-101, -102) and one random (CDC-103) sample were taken. The samples contain as much as 69 ppb gold, as much as 100 ppm silver, as much as 2.11% zinc, as much as 0.46% copper, and >17% lead. No resources have been delineated.
201	Unnamed prospect	0060712817 T15N R14E sec.32	Granite/quartz monzonite has small bull quartz veins. Minor iron oxides coat fractures in the granitic rocks.	One shaft and two prospect pits. No production is known.	Three random samples were taken (CDC-94 to -96). Sample -95 contained 8 ppm silver and 590 ppm zinc. No resources have been delineated.
202	Kewanee mine	0060711597 T15N R14E sec.33	Mineralization consists of cemented gold-bearing quartz breccia in a quartz monzonite, granite and/or granite gneiss (Hewett, 1956, p. 126; Wright and others, 1953, table p. 45). The intrusive is argillic to sericitically altered and silicified. Pyrite, iron oxides, and minor copper oxides were found on the dumps. Extensive fracturing and shearing of the quartz monzonite is evident in outcrop.	Three shafts deeper than 50 ft (Wright and others, 1953, table p. 45). One shaft is reported to be 185 ft deep (Hewett, 1956, p. 126). Also numerous prospect pits. Some rotary drilling has been done by Homestake Mining Co. No production has been reported, but some probably occurred.	Four select (CDC-22, -23, -25, -26), and one random (CDC-24) sample were taken. The samples contained 321 to 29,100 ppb gold, as much as 77 ppm silver, 130 to 1,500 ppm zinc, and as much as 5,900 ppm copper. No resources have been delineated. For further related information see the Ivan group.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
203	Ivan group Homestake Mining Co.	0060712632 T15N R14E sec.33	The area covered by the Ivan claim group includes several square miles, mainly south of the Morning Star mine. The area is underlain predominantly by the Teutonia Quartz Monzonite. The area of interest is on the projected trace of the Morning Star thrust fault in areas mostly covered by a thin layer of colluvium. Gold is in the hanging wall of this fault, probably associated with pyrite and other sulfides.	Two adits, six shafts (mostly inclined at 30° to 35° westerly), and numerous prospect pits; all located west of the area intensively drilled by Homestake. No production has been reported.	Two select (CDC-14, -16), two random (CDC-13, -15), and one chip (CDC-17) samples were taken. Samples contained 8 to 6,310 ppb gold, and as much as 16 ppm silver. Samples were taken from workings that are up to 1/2 mi west of the area drilled. Drilling was done on an extension of the Morning Star fault south of the Kewanee mine in an area mostly covered with a thin veneer of colluvium. No information is available on the drilling or its results. Homestake is the claim owner. Data is confidential. Claims also overlie the Kewanee mine and abut the Morning Star claim group on the north, and the Carriage Wheel on the south.
204	Carriage Wheel	0060712633 T15N R14E sec.33	An intensely iron-oxide-stained and possibly sericitically altered, fine grained granitic rock is at the main shaft. West of the main shaft an outcrop of mafic dike and heavily limonite stained argillites is explored by prospect pits and a shaft. Much of the area is covered by a thin layer of colluvium.	Two inclined shafts and several prospect pits. The main shaft is estimated to be over 100 ft deep. No production is recorded.	One select (CDC-11) and one random (CDC-12) sample were taken. The samples contain 483 and 5 ppb gold, and 37 and <2 ppm silver. No resources are known to have been delineated.
205	Unnamed prospect	0060712830 T15N R14E sec.10	Workings are in sheared argillites and quartzites near a contact with a porphyritic granite. The shear zone has quartz veins that are up to 14 in. thick and contain limonite. The main vein strikes N. 10° E., dipping 23° W.	Eight prospect pits and one inclined shaft (-25°). No production has occurred.	One select sample was taken (CDC-10). The sample contains 701 ppb gold. No resources have been delineated.
206	Unnamed prospect	0060712832 T14N R14E sec.04	Workings are at a contact between granitic rocks and calcareous quartzite and argillite. In places the granitic rocks are porphyritic. Limonite staining on fractures and minor silicification of the granitic rocks is common.	Two prospect pits. No production has occurred.	Two random chip samples were taken (CDC-8, -9). Samples contained 20 and 180 ppb gold and 290 and 1,200 ppm zinc. No resources have been delineated.
207	Unnamed prospect	0060712831 T14N R14E sec.04	The country rock is sheared and silicified quartz monzonite. Some copper oxide coatings are associated with the quartz veining.	An inclined shaft (-30°) about 20 ft deep, and three prospect pits. No production is known.	Two select samples were taken (CDC-4, -5). The samples contained 66 and 579 ppb gold, <2 and 34 ppm silver, 2,100 and <100 ppm zinc, respectively. Sample -5 had >10,000 ppm copper. No resources have been delineated.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
208	Unnamed fluorite prospect	0060712634 T14N R14E sec.05	Fluorite is disseminated in an intensely altered porphyritic monzonite at the contact with quartz monzonite. The surface exposure of the fluorite-rich zone is about 850 ft <sup>2</sup> .	One shaft and two prospect pits. No production is known.	Two random samples were taken (CDC-6, -7). One sample contained >10,000 ppm fluorine. No resources have been delineated.
209	American Opportunity Malcolm Reeves	0060712818 T14N R13E sec.01	The area is underlain by quartz monzonite. Much of the rock is stained with limonite and moderately fractured.	Two small prospect pits. A water well was drilled, but it is not known if water was encountered. No production has occurred.	Two select samples were taken (CDC-93, -112). The samples contained 2 and 4 ppm silver. No resources are known.
210	Teutonia	0060710341 T14N R13E sec.11	The mine area is underlain by coarse- to medium-grained Teutonia quartz monzonite. Mineralization occurs in a N. 65° W. trending fault zone with a vertical to steep dip. The zone at the southeast end of the mine area is 12 ft wide and consists of about 60% propylitically altered (light green epidote), silicified, and limonite-stained monzonite of varied sizes; 20% fault gouge; and 20% quartz veins from 1/4 in. to 1 ft thick. Silver is the predominant valuable mineral.	Two clusters of workings are found at the Teutonia mine. The northwest cluster consists of two deep adjacent shafts centered 30 ft apart. The northwest shaft appears to be at least 50 ft deep (measured with weighted line). A third shaft appears to be only 10 ft deep, but is sloughed in; it is 285 ft S. 60° E. of the main shafts. A 4,000-ft <sup>2</sup> , 8-ft-thick dump occurs between 125 ft and 190 ft S. 60° E. to east of the main shafts; the dump appears to not be adjacent to a working but slumping at 160 ft may indicate a buried shaft. A second cluster of workings is 180 ft west of a cabin ruins, which is about 1,300 ft S. 60° E. of the main northeast workings. These workings include a 30-ft shaft, a northwest-trending 5-ft adit start 100 ft S. 70° E. of the shaft, a 15-ft shaft 70 ft southeast of the adit, and a 20-ft shaft 125 ft southeast of the 15-ft shaft. The Teutonia produced 1,500 oz silver about 1880 (Ralph Pray, 1990, oral commun.).	The Bureau of Mines took three samples: A 12-ft chip sample (CTP 45) across the adit start, 180 ft S. 20° E. of the cabin ruins, contained 35 ppm silver and <2 ppb gold. A grab sample (CTP 46) of mineralized quartz between the adit and 15 ft deep shaft contained 1,070 ppm silver and 3 ppb gold. Estimation of resources will require further work, possibly including drilling. A grab sample (CTP 47) of mineralized quartz from a small stockpile at the main shafts of the northwest workings contained 284 ppb (?) silver and <8 ppb gold.
211	Billy Boy mine	0060712488 T14N R14E sec.17	This property is on a shear zone striking N. 70° E., and dipping 84° S. in the Teutonia Quartz Monzonite. The shear zone contains pyrite with minor copper and zinc oxides, jarosite, limonite, and quartz.	A shaft about 20 ft deep and several prospect pits. No production has been reported.	Three select samples (CDC-1 to -3) were taken. The samples contained 3,670 to 13,000 ppb gold, 4 to 17 ppm silver, 1,800 to 5,700 ppm zinc, and 2,000 ppm copper. No resources have been delineated.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
212	Blue Crystal prospect	0060712284 T16N R16E sec.36	Fluorspar veins occur in Proterozoic granite gneiss. Sparse copper minerals occur along narrow, east-trending fluorite veins.	Three open pits (bulldozer-cleared areas) and two trenches.	One select sample was taken in 1990. Sample CWC-064 contained >1.0% fluorite. Five chip samples taken by Gese (1984, p. 28,29) contained from 7.1% to 59.1% fluorite. Two samples had 0.022 and 0.006 oz/ton gold. One sample contained 0.24% copper.
213	McDermott fluorspar deposit  Blue Crystal Mining	0060710048 T15.5N R16E sec.24	East-trending shear zones in Proterozoic granite gneiss contain narrow fluorite veins associated with sparse copper minerals.	Two adits, one shaft (40 ft deep), and one pit. Several tons of fluorite ore were reportedly shipped in 1925 (Burchard, 1934, p. 395).	Two chip samples contained 13.1% and 14.3% fluorite and 0.11% and 0.31% copper (Gese, 1984, p. 29).
214	Unnamed prospect	0060712954 T15.5N R16E sec.24	A shear zone striking N. 25° E. dipping 75° NW in Proterozoic granite gneiss contains narrow fluorite veins with sparse copper minerals.	One trench and one pit.	One select sample taken in 1990. Sample CWC-065 contained more than 1% fluorite. Three chip samples taken by Gese (1984) contained 0.65%, 3.0%, and 10.4% fluorine.
215	Green Rock prospect	0060712953 T15.5N R16E sec.24	Shear zones in Proterozoic granite contain iron-oxide stained quartz veins.	One 75-ft adit and three pits.	Twelve chip samples were taken. One sample contained 0.014 oz/ton gold; two samples had 1.7 and 0.6 oz/ton silver (Gese, 1984, p. 30).
216	Albermarle mine  Blue Crystal Mining	0060712525 T15.5N R16E sec.24	A 3-to-8-ft-wide fault zone in granite gneiss contains galena, tetrahedrite, chalcopryite, and wulfenite. The mineralized zone trends N. 55° E.	One inclined shaft (96 ft deep) with three levels and 11-ft winze, one trench, and three prospect pits. From 1942 through 1948, the mine produced 112 tons of ore yielding 8,103 lb lead, 957 oz silver, 645 lb copper, and 7 oz gold (USBM production records; Gese, 1984).	Analyses of 31 samples show 11 samples contained from 0.2 to 17.1 oz/ton silver; 8 samples had from 0.2% to 6.85% lead; 3 samples ranged from 0.1% to 0.3% molybdenum; 7 samples contained 0.12% to 0.7% copper; and 4 samples had from 0.01 to 0.048 oz/ton gold (Gese, 1984, p. 36-39).
217	Climax prospect	0060712950 T15.5N R16E sec.24	Brecciated fault zones from 2 to 3 ft wide in granite gneiss show copper-mineral staining.	Two trenches and four pits.	Two chip samples were taken across fault zone breccia: one sample contained 0.002% copper and 0.1% lead; no metals were detected in the other sample (Gese, 1984, p. 31).
218	Unnamed fluorite prospect	0060712959 T15.5N R16E sec.24	A shear zone striking N. 30° W. dipping 55° SW in granite gneiss contains sparse copper minerals along a 2- to 4-in.-wide fluorite vein. The fluorite mineralization can be traced discontinuously along strike for 260 ft.	One 20-ft adit, a 10-ft-deep shaft, and two prospect pits.	Two select samples were taken. Samples CWC-052 and CWC-053 contained >1% fluorite and 0.4% copper. One chip sample taken by Gese (1984, p. 30) contained 0.004% copper.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
219	White Horse	0060712949 T15.5N R16E sec.24	An iron- and manganese-oxide stained, silicified shear zone in granite gneiss contains small quartz veins. The zone strikes N. 45° E. and dips 55° SE and is about 4 ft wide. Sparse copper minerals occur along the shear.	One 40-ft adit, one hand-dug trench, and two backhoe trenches (60 and 120 ft long).	One select sample was taken in 1990. Sample CWC-051 contained 0.36 oz/ton gold and 0.18 oz/ton silver. Two chip samples across the shear zone were taken by Gese, 1984, p. 41. One sample contained 0.036 oz/ton gold, 0.006% copper, and 0.01% lead. The other 35-in. sample contained 0.3% molybdenum.
220	Unnamed shaft	0060712958 T15.5N R16E sec.24	A 2-ft-wide shear zone is in Proterozoic granite gneiss.	One shaft and one pit.	Two chip samples were taken: one contained 0.014 oz/ton gold, 0.03% copper, and 13% fluorite; the other contained 0.06% fluorite (Gese, 1984, p. 29).
221	Nipton (Freethinker)	0060710429 T15.5N R17E sec.19	A shear zone in granite gneiss strikes N. 75° W. and dips 70° NE. The shear contains quartz vein breccia with heavy iron-oxide staining, and hematite stringers in the quartz. A basalt dike from 8- to 12-in wide parallels the shear zone along the east side. Sparse copper minerals occur in the shear zone. Fluorite was reported by Crosby and Hoffman (1951, p. 637).	One shaft (35 ft deep), two adits (50 ft and 6 ft long), and three prospect pits.	Two select samples were taken. Samples CWC-054 and CWC-055 contained 0.46 and 0.01 oz/ton gold, 0.2 and 0.41 oz/ton silver, 0.1% zinc, and 0.1% tungsten.
222	Helen prospect	0060712956 T15.5N R17E sec.19	A shear zone strikes N. 60° W. and dips 80° SW in iron-oxide stained Proterozoic granite gneiss.	Two shafts (15 and 7 ft deep) and one hand-dug trench.	One select sample was taken. Sample CWC-057 contained 0.02% zinc.
223	Sani Lani West	0060712957 T15.5N R17E sec.19	A silicified and argillic altered zone occurs between a Tertiary basalt dike and Proterozoic granite gneiss.	Two shafts (each more than 50 ft deep), two adits (each 60 ft long), one caved adit, and two pits.	One sample contained 0.001% copper and 0.02% lead (Gese, 1984, p. 33, 42).
224	San E Lani No. 2	0060712955 T15.5N R17E sec.19	A silicified shear zone is in heavily iron-oxide stained Proterozoic granite gneiss.	One shaft 15 ft deep and one pit.	One select sample was taken. Sample CWC-062 contained 0.12 oz/ton silver.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
225	Lily mine	0060712952 T15.5N R17E sec.19	A contact between Tertiary basalt and Proterozoic granite gneiss is brecciated and contains iron- and manganese-oxide staining. A quartzite mass fully 1,000 ft wide is brecciated and silicified (Vanderburg, 1937, p. 22).	Seven adits, 5 shafts, 14 trenches, and 12 pits. Production in 1941 amounted to 35 tons of ore containing 5 oz gold, 28 oz silver, 154 lb copper, and 1,193 lb lead (USBM production records).	Three select samples were taken in 1990. Sample CWC-058 contained 0.48 oz/ton gold, 0.18 oz/ton silver, 0.54% lead, and 0.16% zinc. Sample CWC-059 contained 0.25 oz/ton gold, 1 oz/ton silver, >1% lead, and 5.6% zinc. Sample CWC-063 contained no significant amounts of metallic elements. Twelve of 42 samples taken by Gese (1984, p. 8, 31-34) across the basalt/granite contact zone contained from 0.006 to 0.324 oz/ton gold and 0.13% to 0.45% lead.
226	B. T. prospect	0060712951 T15.5N R17E sec.19	A silicified breccia zone in granite gneiss has manganese- and iron-oxide staining.	One 25-ft shaft, two bulldozer trenches, one hand-dug trench, and two pits.	One select sample was taken in 1990. Sample CWC-060 contained 0.03 oz/ton gold, 0.13% lead, and 0.04% zinc. Gese (1984, p. 31) took three chip samples and one grab sample from the dump. Three chip samples contained none, 0.022, and 0.008 oz/ton gold; two chip samples contained 0.02% and 0.03% lead. The grab sample had 0.006 oz/ton gold.
227	San E Lani No. 1	0060713004 T15.5N R17E sec.19	A large silica cemented quartz breccia body rests on Proterozoic granite gneiss. Iron-oxide stained quartz veins occur with easterly trending shear zones (Ransome, 1907, p. 79, 80).	One shaft 40 ft deep, and three pits.	One select sample was taken. Sample CWC-061 contained 0.09% barium, 0.024% lead, and 0.043% zinc.
228	Unknown shaft	0060712960 T15.5N R17E sec.33	A 3- to 6-ft-wide shear zone in granite is silicified and heavily iron-oxide stained. The shear zone strikes N. 71° E. and dips 75° SE.	One 35-ft shaft.	One select sample was taken. Sample CWC-047 contained 0.12 oz/ton silver.
229	Unnamed	0060712535 T15N R17E sec.04	Fault and breccia zones are in granite gneiss. Pegmatite dikes and silicified zones are also present.	Eight trenches and six pits.	Fourteen samples were taken: four samples contained 0.001% to 0.002% U <sub>3</sub> O <sub>8</sub> (Gese, 1984, p. 47-48).
230	Unknown prospect	0060712664 T15N R17E sec.20	A 3-ft-wide shear zone contains seams and veinlets of black hematite in quartz veins. The zone strikes N. 20° W. and dips 75° SW. in Early Proterozoic monzogranite.	One shaft 35 deep with a drift at the bottom and one adit at least 50 ft long.	One select and one chip sample were taken. Samples CWC-016 and CWC-017 contained no significant amounts of metallic elements.
231	Rex claims	0060712964 T15N R16E sec.14	A shear zone striking N. 10° W and dipping 88° NE occurs in Proterozoic metamorphic tuffs. Mineralization events produced quartz, pyrite,	One shaft.	Five samples contained no detectable gold (Homestake Mining Company, unpublished report, 1988).

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
			sphalerite, and biotite.		
232	Silver Don	0060712526 T15N R16E sec.14	Fault and breccia zones in granitic and mafic gneiss average 0.3 ft wide, but two fault zones are 3 and 5 ft wide.	Three adits, one shaft, one trench and one pit.	Four of 26 samples contained silver values ranging from 0.2 to 0.4 oz/ton silver. Three samples ranged from 0.11% to 1.20% copper (Gese, 1984, p. 8, 43-45).
233	Big Thunder (Don's claim) David Pierce	0060712283 T15N R16E sec.22	Fault and breccia zones are in Proterozoic granite and mafic gneiss.	One shaft, one adit, and two pits.	Select samples contained up to 0.76 oz/ton silver, 1.0% lead, 3.4% copper, and 0.2% zinc (S. W. Pierce, 1990, personal communication).
234	Germanite	0060712965 T15N R16E sec.22	Several pegmatite dikes up to 3 ft wide intrude amphibole schist.	Four trenches.	Analyses of five chip samples ranged from 0.001% to 0.005% copper, 0.02% to 0.1% lanthanum oxide, and 0.003% to 0.19% thorium oxide (Gese, 1984, p. 46).
235	Unknown prospect	0060712671 T15N R16E sec.21	A 1- to 2-ft-wide fault zone strikes N. 85° E. with vertical dip, cuts Early Proterozoic quartzofeldspathic gneiss. The fault zone is heavily iron-oxide stained and contains small clear, vitreous quartz veinlets and veins up to 6 in. wide.	One 30-ft-deep shaft and two 5-ft-deep, hand-dug trenches.	Two select samples were taken. Samples CWC-29 and CWC-30 contained 0.11 and 0.004 oz/ton gold and 0.09% and 0.01% zinc.
236	Unknown shaft	0060712670 T15N R16E sec.28	A 2-ft-wide, vertical shear zone strikes N. 8° E. in quartzofeldspathic gneiss of Early Proterozoic age. The shear zone is heavily iron oxide stained and contains clear, vitreous quartz veins up to 4 in. wide. The iron-oxide extends about 6 ft beyond the shear zone into the gneiss.	One shaft about 30 ft deep.	One select sample was taken. Sample CWC-028 contained 0.02 oz/ton gold.
237	Eagle prospect W. A. Walters (1930)	0060712669 T15N R16E sec.28	A shear zone from 3 to 4 ft wide strikes N. 75° E. and dips 85° NW. in Early Proterozoic hornblende amphibolite. A 6-in. gouge zone is along the footwall. The shear zone is heavily iron-oxide stained and contains quartz veins up to 6 in. wide. The iron-oxide extends several feet into the amphibolite country rock.	One shaft about 50 ft deep with drifts, one 25 ft adit, one open cut, and two prospect pits.	Two select samples were taken. Samples CWC-025 and CWC-026 contained 0.71 oz/ton gold, 0.73 and 0.44 oz/ton silver, 0.85% and 0.69% lead, and 0.29% and 0.03% zinc.
238	Unknown shaft	0060712976 T15N R16E sec.28	A shear zone strikes east and dips vertically in Proterozoic granite gneiss. Quartz veins occupy fissures in the shear zone.	One shaft about 20 ft deep.	One select sample was taken. Sample CWC-027 contained 0.3 oz/ton gold, 0.18 oz/ton silver, 0.11% lead, and 0.09% barium.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
239	Graphite prospect	0060712666 T15N R16E sec.33	A 6-in. graphite-rich layer strikes N. 25° W. and dips 65° SW. in garnet-bearing, quartzo-feldspathic, layered gneiss of Early Proterozoic age. Graphite is coarsely crystalline occurring in clots up to 1 in. in diameter.	One trench 20 ft long.	One sample was taken. Sample CWC-020 contained 0.05% barium and 0.03% chromium.
240	Summit prospect	0060712948 T15N R16E sec.27	Quartz veins occur along a contact between amphibolite schist and a quartz, potassium feldspar granitic gneiss. The quartz contains malachite, galena, sphalerite, and ferrimolybdenite.	One shaft (30 ft deep with drifts), one adit (greater than 100 ft long), and one pit.	One select sample was taken. Sample CWC-046 contained 0.21 oz/ton gold, 6.9 oz/ton silver, >1% copper and lead, 0.3% zinc, and 0.05% molybdenum.
241	Unknown shaft	0060712947 T15N R16E sec.27	Milky quartz veins occur in a fault zone between amphibolite schist and granitic gneiss. The fault strikes N. 85° W. and dips 45° NE. Seams of hematite up to 1/2 in. thick occur in the vein quartz.	One 10-ft-deep shaft.	One select sample was taken. Sample CWC-045 contained no significant amounts of metallic elements.
242	Purple Bottle prospect	0060712946 T15N R16E sec.27	Chloritic alteration occurs along a shear zone striking N. 20° E. dipping 75° NW. in amphibolite schist.	One shaft 8 ft deep, one open cut, and one pit.	One select sample was taken. Sample CWC-044 contained 0.85% zinc.
243	Unknown inclined shaft	0060712945 T15N R16E sec.27	An iron-oxide-stained, silicified fault zone strikes N. 40° E. and dips 40° NW in granite gneiss.	A shaft 20 ft deep is inclined 40° northwesterly; one 6-ft-long adit and one pit.	One select sample was taken. Sample CWC-043 contained 0.07 oz/ton gold, 0.88 oz/ton silver, and 1.3% zinc.
244	Unknown prospect	0060712944 T14N R16E sec.27	A milky quartz vein occurs in a shear zone striking N. 60° W. dipping vertically along a contact between amphibolite schist and granite gneiss.	One pit.	One select sample was taken. Sample CWC-042 contained no significant amounts of metallic elements.
245	Monarch	0060712942 T15N R16E sec.26	A 2-ft-wide shear zone in granite gneiss strikes due east and dips vertically. Chlorite (?) is present along the margins of the shear.	Two pits.	One chip sample was taken. Sample CWC-037 contained no significant amounts of metallic elements.
246	Gold/Red prospect	0060712937 T15N R16E sec.35	A 4-in.-wide fissure vein strikes N. 6° E and dips vertically in Proterozoic granite rock.	One shaft 25-ft-deep, one hand-dug trench, and one 100-ft-long bulldozer trench.	One select sample was taken. Sample CWC-041 contained 0.36 oz/ton gold, 0.7 oz/ton silver, >1% lead, 0.3% zinc, and 0.4% arsenic.
247	Bonanza	0060712938 T15N R16E sec.35	A breccia zone in granite gneiss is iron-oxide stained.	One trench.	One chip sample contained no significant amounts of metallic elements (Gese, 1984, p. 35).
248	Signal No. 1	0060712936 T15N R16E sec.35	Proterozoic granite gneiss is silicified and iron-oxide stained.	One pit	One select sample was taken. Sample CWC-040 contained 0.25 oz/ton gold, 0.41 oz/ton silver, >1.0% lead, and 0.17% zinc.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
249	Old Joe	0060712943 T15N R16E sec.34	A shear zone, which strikes N. 55° E. and dips 55° NW in granite gneiss, contains breccia and fault gouge with iron- and manganese-oxide staining.	One shaft, one bulldozer trench, and three prospect pits.	One select sample was taken in 1990. Sample CWC-039 contained 0.45 oz/ton gold, 0.41 oz/ton silver, >1% lead, and 0.3% zinc. Three samples were taken by Gese (1984, p. 35). One sample contained 0.1% lead.
250	Mastodon	0060712939 T15N R16E sec.34	Altered gneiss has iron-oxide staining.	One shaft, one 6-ft-long adit, and two pits.	One select sample was taken in 1990. Sample CWC-038 contained 0.22 oz/ton gold, 0.15 oz/ton silver, 0.17% zinc, and 0.17% barium. One sample taken by Gese (1984, p. 35) contained 0.08% lead.
251	Golden Treasure shaft	0060712940 T15N R16E sec.34	A quartz vein strikes N. 70° E. and dips 70° NW in Proterozoic granite gneiss. Sparse copper minerals and lead oxides occur in the vein.	One 30-ft-deep shaft.	One select sample was taken. Sample CWC-035 contained 0.73 oz/ton silver and 0.35% lead.)
252	Roman	0060712665 T15N R16E sec.34	A 6-in.-wide, iron-oxide-stained, shear zone in Proterozoic granite gneiss strikes N. 70° E. and dips vertically. Copper- and chromium-bearing minerals occur along the shear zone.	Two prospect pits.	One chip sample was taken. Sample CWC-019 contained 0.4% chromium and 0.01% copper.
253	Willow prospect	0060712799 T15N R16E sec.34	A heavily iron-oxide-stained shear zone strikes N. 80° E. and dips 45° NW in Proterozoic granite gneiss.	Two pits and a 125-ft-long trench.	One select sample was taken. Sample CWC-033 contained no significant amounts of metallic elements.
254	West Mammoth	0060712941 T15N R16E sec.33	A fault zone in gneiss is highly brecciated and contains small quartz veins.	One shaft 10-ft deep and eight pits.	One chip and one select sample were taken. Select sample CWC-036 contained 2.05% barium and 0.21% chromium. Chip sample CWC-036 contained no significant amounts of economic metals.
255	Unnamed Unclaimed	0060712656 T14N R16E sec.05	A wedge-shaped exposure, about 150 long and 200 ft thick, of green, soft, impure talc-bearing rock outcrops on the side and nose of a ridge. Greenish-black soapstone occurs interlayered with gneiss mainly near the bottom of the exposure along a stream bed. Just above the stream bed, the soapstone is cut by numerous quartz stringers (1/8" to 1.5" wide) along a 1.5 ft thick fault zone that strikes N. 30° W and dips about 70° W.	One small pit; five cuts, 5 to 20 ft long; and a 125-ft-long dozer cut with a small pit at one end. Dennis Bensen of Nipton, CA stated his father claimed and explored the prospect for lapidary-grade soapstone in the mid-1960s; however, little, if any, was sold.	A chip sample (CRM-12) taken across the 1.5-ft-thick fault zone assayed no significantly anomalous metals. The rock is of poor color and too impure to be a talc resource, and little of the soapstone is suitable for lapidary use.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
256	Unknown Copper prospect	0060712668 T15N R16E sec.33	Copper minerals occur in a contact zone between a mafic intrusive body and carbonate rock. The mineralized zone trends about N. 40°-60° W. and is from 2 to 6 ft wide. Pyrite and bornite are the primary sulfide minerals.	Three shafts from 25-30 ft deep, two open cuts, three pits, and a 60-ft-long, hand-dug trench.	One select and one chip sample were taken. Samples CWC-022 and CWC-023 contained >1% copper, 0.15% zinc, 0.35 oz/ton silver, and 0.17% barium.
257	Unknown prospect	0060712667 T14N R16E sec.04	A silicified zone about 2 ft wide strikes N. 20° W. and dips vertically in metamorphosed carbonate rocks. The silicified zone parallels the contact with mafic rock about 100 ft to the east. Minerals include garnet and copper silicates.	One 25-ft deep shaft with a drift at the bottom and five pits.	One select samples was taken. Sample CWC-024 contained 3.8 oz/ton silver, >1% copper, and 0.55% zinc.
258	Vanderbilt mines	0060710196 T14N R16E sec.04	Proterozoic granite gneiss and mica schist are cut by two mineralized fault zones which strike N. 55°-63° W and dip 65°-80° NE. Many branch veins and/or cross veins are between the two main veins. Mineralized fault zones are accompanied by heavily argillic altered, gray dike rocks which are highly fractured. Ore shoots occur along dike-schist contacts and as lenticular bodies within the fractured, light gray dikes. Gold is associated with pyrite. Sulfide ore consists of quartz with major pyrite and minor chalcopryrite, galena, sphalerite, marcasite, cubanite, and traces of arsenopyrite, magnetite, tennantite, tetrahedrite, bornite, and pyrrhotite. Veinlets of hematite up to 5 in. wide were noted (Fisk, 1972).	Several open pits and a 10- by 11-ft inclined ramp which intersected the old Gold Bar vein workings. Production for the Vanderbilt mines from 1914 to 1941 amounted to 2,100 oz gold, 8,300 oz silver, 16,200 lb copper, and 5,000 lb lead (Hewett, 1956, p. 126).	General grade of ore developed is: 0.62 oz/ton gold, 3.74 oz/ton silver, 0.70% lead, and 0.51% copper (Tucker and Sampson, 1930, p. 257). Resources at the Vanderbilt mines were estimated in 1972 as 383,000 tons of ore, containing 224,000 oz gold, 1.1 million oz silver, 1.9 million lb copper, and 2.6 million lb lead (Fisk, 1972).
259	Gold Bar mine	0060712930 T14N R16E sec.03	The Gold Bar vein system strikes N. 55°-63° W. and dips northeast. A highly altered gray dike up to 20 ft wide follows the vein system. Ore shoots are lenticular in shape and overlap each other at their ends. Clay accompanies the shoots and often contains embedded fragments of quartz and small pockets of sulfide ore (Fisk, 1972, p. 7).	Three shafts known as the Gold Bar, Ed, and Baldwin. The Gold Bar shaft is 425 ft deep, inclined 60°; The Ed shaft is 400 ft deep; and the Baldwin is 300 ft deep. See Vanderbilt mines for production data (Map no. 258).	Developed ore contained 0.62 oz/ton gold, 3.74 oz/ton silver, 0.70% lead, and 0.51% copper (Tucker and Sampson, 1930, p. 257). An estimated 220,000 tons of resources containing 112,000 oz gold, 684,000 oz silver, 2.5 million lb lead, and 1.85 million lb copper (Fisk, 1972, p. 15).
260	Darling mine (Midnight)	0060710089 T14N R16E sec.03	Two vein systems are in Proterozoic granite gneiss. The quartz veins are from 3 to 6 ft wide (Hewett, 1956, p. 126).	Four inclined shafts from 55 to 300 ft deep with several hundred feet of drifts. Recorded production is 47 tons of ore yielding 31 oz gold and 55 oz silver in 1909 and 1940 (USBM production records).	Ore consists of quartz with sparse pyrite and is stated to carry 0.5 to 1.0 oz/ton gold (Tucker, 1930, p. 233).

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
261	Gold Bronze mine	0060710106 T14N R16E sec.03	A quartz vein system strikes west-northwest and dips 60°-70° NE in Proterozoic granite gneiss and amphibole schist. The quartz vein contains fine-grained masses of pyrite, coarse crystals of galena, and arsenopyrite (Hewett, 1956, p. 127).	One shaft (300 ft deep) with drifts. About \$50,000 (2,400 oz) of gold was reportedly produced between 1893 and 1895 (Hewett, 1956, p. 127). Production in 1902, 1909, 1913, 1937, and 1940 totalled 245 oz gold, 203 oz silver, 21 lb copper, and 481 lb lead (USBM production records).	Mined ore reportedly averaged 1 oz/ton gold (Tucker and Sampson, 1930, p. 237). An estimated 40,000 tons of gold resources contain 13,200 oz gold, 72,000 oz silver, and 16,000 lb copper (Fisk, 1972, p. 16).
262	Coyote shaft	0060712973 T14N R16E sec.03	Quartz veins occur in a fault zone striking east with a nearly vertical dip. Proterozoic granite gneiss and amphibole schist are the predominant host rock (Heavy Metals Technology Corp., 1967).	One shaft.	The Coyote shaft is located on the eastern part of the Gold Bronze vein system. See Vanderbilt mines (Map no. 258) for general characterization of ore.
263	Red Barnacle No. 56	0060712663 T14N R16E sec.02	A 2-ft-wide fault zone in Early Proterozoic gneiss strikes N. 20° E. and dips 65° NW. The shear zone has light iron-oxide staining and chloritic alteration of mafic minerals.	Three bulldozer trenches each about 100 ft long.	One chip sample was taken. Sample CWC-015 contained 48.1 ppm scandium and 15.1 ppm samarium.
264	Boomerang mine	0060712931 T14N R16E sec.03	The Boomerang vein system strikes N. 55°-63° W. and dips 80° NE in Proterozoic granite gneiss and schist. Ore occurs in a series of lenticular bodies within a heavily altered dike which accompanies the vein system. Gold is associated with pyrite in a gangue of quartz. Veinlets of hematite up to 5 in. wide occur near the Boomerang shaft (Fisk, 1972).	One shaft 565 ft deep with drifts. Recorded production from 1897 to 1975 amounted to 3,878 oz gold, 13,358 oz silver, 7,711 lb copper, 29,895 lb lead, and 8,488 lb zinc (USBM production records).	Produced ore averaged 1 oz/ton gold. Estimated resources are 123,000 tons containing 98,000 oz gold and 344,000 oz silver (Fisk, 1972, p. 13).
265	Unnamed (Piehls Quarry ?) Pfizer Inc., Lucerne Valley, C	0060712629 T14N R16E sec.08	White limestone, several tens of feet thick, crops out over several acres. The limestone contact with quartz monzonite is irregular and characterized by several feet of heavily iron-oxide-stained, epidotized, garnet-rich material which in places contains blebs of quartz up to 2 ft thick and several feet long. Some of the limestone is crystallized in marble. This property may be the Piehls quarry which Hewett (1956, p. 65) reports was opened for marble.	Six cuts, 17 to 40 ft wide, extend 15 to 30 ft into the lower slope of a hill. The workings indicate that several hundred tons of limestone or marble may have been shipped.	Two samples: A grab sample (CRM-11) of the limestone assayed 44.65% CaO, 24.15% SiO <sub>2</sub> , and 25.75% L.O.I. A chip sample (CRM-10) of iron-stained quartz at the contact assayed no significantly anomalous metals.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
266	Ivanpah Limestone deposit; Meevint (claims, O'Connell deposit) Pfizer Inc., Lucerne Val., CA	0060710451 T14N R16E sec.09	White limestone, a few hundred feet thick, crops out on northeast, north, and northwest slopes of a north-trending ridge.	Five adits each less than or about 50 ft long, one tunnel (a half circle) about 175 ft long, and numerous dozer cuts. Some production occurred in the past. (Wright and others, 1953, p. 175).	A grab sample (CRM-9) of limestone from the lower adit assayed 54.29% CaO, 1.12% SiO <sub>2</sub> , 0.05% Fe <sub>2</sub> O <sub>3</sub> , 0.68% MgO, and 43.75% L.O.I. Data supplied by the owner indicates a resource of 42,000,000 tons of commercial-grade limestone (U.S. Bureau of Land Management, 1980, p. 149). More recent data is proprietary.
267	Unnamed  Vanderbilt Gold Corp., San Mat	0060712803 T14N R16E sec.11	A 4-12 in.-thick layer of gray opaline material capping bright-red iron-oxide-stained granitic gneiss or possibly granite exposed on both banks of the Ivanpah Road (improved dirt). The exposure (about 25 ft long, 4 ft high) is covered by a few feet of alluvium except in the road cut.	No workings or production are associated with this deposit; however, workings and production are associated with other deposits (quartz veins) on the claim group controlled by Vanderbilt Gold Corp.	A chip sample (CRM-40) of the opaline layer and underlying altered rock assayed no significantly anomalous metals.
268	Ivanpah Wollastonite deposit  Pfizer Inc., Lucerne Valley, C	0060712801 T14N R16E sec.08	A 10- to 15-ft-thick layer of gray, massive wollastonite at least 250 ft long occurs about 20-30 ft above the contact with Teutonia Quartz Monzonite. The layer strikes N. 40° E. and dips about 82° SE. A number of wollastonite layers, averaging about 1 in. thick, also occur in the siliceous limestones for a few tens of feet above and below the massive layer. Malachite and azurite occur in several iron-stained quartz veins and shears in the granite just below the limestone. The quartz veins range from a few inches to at least 1.2 ft thick.	Old workings for copper include a 20-ft shaft, a 20-ft adit, and two cuts. New workings for wollastonite include about 1,000 ft of dozer road to the prospect (the last 20 ft or so cuts the deposit).	A select sample (CRM-36) of a few hundred pounds of malachite- and azurite-stained quartz at the shaft dump assayed 0.26 oz/ton silver and 0.32% copper. The grade is too low and the tonnage of vein quartz is too small to be a resource for copper or other metals. Pfizer Inc. reports that the wollastonite deposit is probably of too poor quality to be economic.
269	Unnamed	0060712654 T14N R16E sec.07	Country rock is Teutonia Quartz Monzonite cut by numerous iron-oxide-stained fractures, felsic dikes, and 1/2-in. to 12-in.-thick quartz veins of various attitudes. At the workings, the country rock is the most intensely altered, and several thin quartz veins contain sparse crusts of malachite, azurite, and hematite cubes altered from pyrite. The veins at the workings strike N. 66° W. to due west and dip 66° SW to vertical and parallel two felsic dikes 2 ft and 25 ft thick that apparently cut a small roof pendant of metasediments just downslope of the shaft.	A 50° inclined shaft trends N. 66° W. and is about 75 ft deep, a 25-ft-long adit trends due west and is inclined about 25°, and a 10-ft-long trench. No recorded production but a loading dock indicates that some ore, probably just a few tons, was shipped.	Two samples: A grab (CRM-1) taken of vein quartz pieces at the shaft dump assayed 0.15% copper and 0.46% lead. Another grab sample (CRM-2) taken from about 2 tons of apparent shipping-grade vein quartz on the loading dock assayed 0.04% copper and 0.32% lead.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
270	Red Chief	0060712800 T14N R16E sec.18	Two sub-parallel veins about 20 ft apart cutting quartz monzonite country rock. The largest vein is a few hundred feet long, strikes N. 42° W. to N. 22° W., and dips vertically to 80° W. The vein is about 5 ft thick at its southeast end but pinches off at its northwest end. The other vein is about 10-12 in. wide and a few tens of feet long. The veins are highly fractured and stained pink, red, yellow, orange, and black by iron and manganese oxides.	A small cut explores the large vein.	A select sample (CRM-35) from both veins assayed 217 ppm molybdenum. Note: this prospect is probably the "Red Chief" described by Wright and others (1953, Tab. List, p. 92) as being in sec. 17 or 18, T14N, R16E, and being for mercury. The sample (CRM) assayed only 90 ppb mercury.
271	Gillsmith and Victory (?)  Pfizer Inc., Lucerne Valley CA	0060710361 T14N R16E sec.08	A skarn zone, which contains numerous quartz veinlets and which may average about 5 thick, follows the irregular contact of limestone and Teutonia Quartz Monzonite. The skarn zone contains epidote, garnet, and sparse pyrite, hematite cubes after pyrite, rare chalcopyrite, fluorite, and possibly some smithsonite. Wright and others (1953, p. 117, No. 361)) also report scheelite at the property.	Workings include a half-circle tunnel about 50 ft long; an 80-ft shaft, and a 20-ft shaft. No production is known.	A select sample (CRM-63) of the dump at the upper shaft-adit assayed 0.79 oz/ton silver, >1.0% copper, 0.51% fluorine, 0.15% tungsten, and 560 ppm zinc.
272	63 Unnamed	0060712790 T14N R16E sec.10	Dark Precambrian gneiss cut by a 3- to 6-ft thick granitic dike that strikes N. 30° W. and dips 70° SW. to vertical. The footwall contact of the dike is bounded by discontinuous veins or blebs of iron- and manganese-oxide-stained quartz up to 8 in. thick. Small vugs with quartz crystals occur in the quartz. Two other quartz veins, up to 4.0 in. thick, strike N. 40° E. and dip 85° SE. in the gneiss.	A circular pit 15 ft in diameter by 3 ft deep.	A select sample (CRM-27) of quartz from the dump assayed 1.11 oz/ton silver, 120 ppm arsenic, and 185 ppm tungsten.
273	Unnamed	0060712655 T14N R16E sec.15	Two silicified shear zones about 300 yd apart striking N. 40° W. to N. 55° W and dipping 52°-70° SW. and cutting light to dark gneiss. One shear zone is at least 4 ft thick and is chloritized, limonite-stained, and contains numerous quartz veins, veinlets, and blebs up to 12 in. thick. The other shear zone is at least 4 ft thick and contains discontinuous quartz veinlets and veins up to about 1.1 ft thick. Malachite and azurite staining is very sparse.	Two pits and two dozer cuts 60 and 75 ft long.	Two samples: a chip sample (CRM-13) of the southwestern shear assayed no significantly anomalous metals. A select sample (CRM-21) from the dumps of the two dozer cuts in the northeastern shear assayed 33 ppb gold, 4.67 oz/ton silver, 111 ppm arsenic, and >1.0% lead.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
274	Unnamed	0060712791 T14N R16E sec.14	A 2-ft-thick limonite-stained shear zone that strikes S. 40° E. and dips 45° SW. at the contact between dark gneiss and granitic (?) gneiss. The zone contains quartz veins or blebs up to 6 in. thick and is cut by a prominent fracture that strikes N. 55° W. and dips vertical.	A shaft, about 30 ft deep, inclined about 45° SW.	A select sample (CRM-22) of quartz pieces from the dump assayed no significantly anomalous metals.
275	Unnamed Abandoned prospect	0060712921 T14N R15E sec.13	Two parallel quartz veins, 0.5 and 1.25 ft thick and 2 to 3 ft apart, strike N. 28 W. and dip 42° SW. in quartz monzonite. The quartz monzonite between the veins and for at least 7 ft below the footwall vein is green sericitized and kaolinized. The top of the hanging wall vein is locally capped by plates of quartz crystals. The veins, of unknown length, apparently occupy a branching shear zone several tens of feet thick with a probable general trend of N. 57° W. that can be traced for a few hundred ft but is undoubtedly much longer. The veins are moderately stained by iron oxides and rarely by malachite and azurite. The alluvium about the prospect contains numerous pieces of vein quartz float up to 2 ft thick.	Workings include a 20-ft cut, a 5-ft-deep pit, and a small pit.	A select sample (CRM-70) from the dump of the cut assayed 410 ppm copper, 216 ppm lead, and 84 ppm arsenic.
276	Unnamed Abandoned Prospect	0060712922 T14N R15E sec.13	A 3-ft-thick shear zone that strikes N. 70° E. and dips 40° SE in quartz monzonite. Quartz stringers up to 2 in. thick occupy the shear zone. The shear zone is more silicified and iron-oxide stained and contains very sparse malachite and azurite near the hanging wall. The quartz monzonite host rock is altered for several feet above and below the shear zone and is characterized by Liesegang bands.	The main working is a 40° inclined shaft of unknown depth. The collar of the shaft is at the right wall of a 50-ft cut near the face; at the face of the cut is an adit of unknown length that turns to the right. A cut and 2 pits are upslope of the adit.	A select sample (CRM-71) from the dump of the cut-shaft-adit assayed no significantly anomalous metals.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
277	Unnamed	0060712923 T14N R16E sec.19	A silicified shear zone of varying thickness but at least 8 ft thick in places that is occupied by thin rhyolite dikes and one or more quartz veins or lenses 1.5 to possibly 8 ft thick. The shear zone strikes N. 75° W. to N. 80° W.; the dip varies but is generally vertical. Other minor shear zones branch off from the main shear zone. Locally, the quartz veins contain minor pyrite, black, very small unidentified sulfides, and are moderately stained by iron oxides. The quartz monzonite host rock is sericitized, kaolinized, and epidotized within the shear zone and for several feet, mostly on the north side of the shear zone. The shear zone can be traced for at least 1,500 ft but is probably much longer.	The shear zone has been explored by workings for about 1,200 ft. The main working and the westernmost, is a shaft, 14 ft square and about 60 ft deep. Other workings on the main shear zone or branches include 20-, 25-, and 50-ft cuts, a caved shaft 15 ft deep, and a pit about 6 ft deep.	Two samples: A select sample (CRM-72) from the dump of the main shaft assayed 0.21 oz/ton gold, 12.06 oz/ton silver, and 0.64% lead. Another select sample (CRM-73) from the dump of the southernmost working (the 15-ft-deep caved shaft) assayed 0.41 oz/ton silver.
278	Unnamed	0060712924 T14N R16E sec.18	Three geologic environments: (1) Quartz monzonite host rock cut by a 10-ft-thick, 100-ft-long pegmatite lens that is flat-flying or shallow dipping to the north; (2) A slightly silicified shear zone a few feet thick adjacent to a 0.5-2.0 thick aplite dike strikes about N. 55° W. and dips 70° NE. to vertical; (3) Fractures, 1-3 in. thick, in quartz monzonite filled by gouge--some moderately stained by iron oxide--strike N. 45° E and dip 60° SE along with other thin fractures of various attitudes.	Workings include an adit, inclined at 20°, of unknown length that explores the pegmatite, a small cut that explores the silicified shear zone, and a 40-ft cut that explores the fractures in quartz monzonite. A 20-ton pile of green, sericitized, kaolinized quartz monzonite is near the 40-ft cut. The source of this material is unknown.	A chip sample (CRM-74) of iron-oxide-stained gouge from a 3-in.-thick fracture assayed 23 ppb gold.
279	Manvel prospect	0060712928 T14N R16E sec.15	A quartz vein with sparse copper minerals strikes N. 75° W. with vertical dip in Proterozoic amphibole schist.	One pit.	One chip sample was taken. Sample CWC-032 contained 0.21 oz/ton silver and 0.16% zinc.
280	Opal prospect	0060712929 T14N R16E sec.22	Silicified rhyolite breccia with iron-oxide-stained matrix. Clasts are rhyolite and chalcedony fragments; some opaline zones are present.	One pit.	One select sample was taken. Sample CWC-031 contained 0.14% barium.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
281	Unnamed	0060712794 T14N R16E sec.22	Several small outcrops or dikes of rhyolite are exposed on the lower slopes of an elongate hill capped by over 100 ft of alluvium. Some of the rhyolite is altered to gray, yellow, pink-red clay, and some is slightly silicified. Some scattered rhyolite float is altered to a green color due to epidotization and chloritization.	A dozer cut about 300 ft long, 150 ft wide, and about 10 ft deep at its upslope end. The cut extends lengthwise along the lower slope of the hill. A dozer road traverses the entire length of the cut about 60 ft upslope. A 15-ft-long adit exposes rhyolite at the west end of the cut. The commodity is unknown - it may have been sand and gravel, clay, or gold. Any production is unknown.	Two samples: A chip sample (CRM-28) of clayey rhyolite from the right side of the portal of the adit assayed no significantly anomalous metals. A select sample (CRM-26) of iron-oxide-stained and slightly silicified rhyolite assayed no significantly anomalous metals.
282	Unnamed	0060712795 T14N R16E sec.22	Two quartz veins, 1- to 5-ft thick, that strike N. 65° W. to N. 77° W. and dip about 80° SW. The veins, several hundred feet apart, are highly brecciated and cemented by dark brown-black iron- and manganese-oxider filling, and yellow-orange chalcedonic (?) quartz. Hematite cubes after pyrite are rare on the northern veins. Very small, soft, orange, crystals (probably vanadinite) occur on fracture surfaces at the southern vein. The quartz monzonite host rock is highly fractured, sericitized, and gougy for 3 to 5 ft on either side of the veins.	A cut about 35 ft long, 8 to 15 ft wide, and about 6 ft high at the upslope end explores the northern vein, and a pit about 20 ft long, 15 ft high, and 3 ft deep explores the southern vein.	Two samples: A chip sample (CRM-29) taken across the northern vein assayed 82 ppb gold, 0.38 oz/ton silver, 494 ppm molybdenum, and 0.19% lead. A chip sample (CRM-30) taken across the southern vein assayed 0.04 oz/ton gold, 17.08 oz/ton silver, 0.13% arsenic, 0.21% molybdenum, 560 ppm Ni, >1.0% lead, 1.74% antimony, and 690 ppm zinc.
283	Trio mine Mrs E Eldridge, El Centro, CA	0060710054 T14N R16E sec.21	A number of short copper- and lead-sulfide bearing lenses, a few ft wide, occur at irregular intervals along east-trending, steeply north-dipping fractures in limestone (Bradley, 1943, p. 437). Gangue minerals include massive brown garnet, diopside, epidote, and wollastonite (Hewett, 1956, p. 147).	Workings include three shafts--one of which is reported to be 300 ft deep, two tunnels--one of which is reported to be 150 ft long, and several pits (Bradley, 1943, p. 437). Production in 1916-1917 includes 38 oz gold, 124 oz silver, 41,801 lb copper and 72,710 lb lead (Hewett, 1956, p. 147).	Sample and resource data is proprietary.
284	Unnamed	0060712792 T14N R16E sec.21	Two parallel shear zones, filled by grey gouge strike N. 55° E. and dip vertical to 70° SE. The shear zones, 2 ft and 4 ft thick, are separated by 6 ft of altered, broken, sericitized quartz monzonite host rock. Moderate iron-oxide-staining occurs in 2- to 6-in. thick blebs and layers along fractures next to the shears. Cubic voids after pyrite occur where iron-oxide-staining is more prevalent.	A trench, 20 ft long, 8 ft wide, and 7 ft deep.	A chip sample (CRM-24) taken across the more intensely iron-oxide-stained fractures and shears assayed 0.58 oz/ton silver, 0.21% barium, and 630 ppm zinc.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
285	Unnamed  Unknown	0060712793 T14N R16E sec.21	Within quartz monzonite host rock, a fault/shear zone, about 100 ft wide and at least 1,000 ft long trends southeast from a small peak down a ridge. The zone is cut by numerous quartz veins from about 1 in. to about 2.5 ft thick. The largest vein, in about the center of the zone, contains at least two mineralized shoots in which abundant sulfides (pyrite plus possibly some arsenopyrite) occur. The lengths of the shoots are unknown but appear to be about 30-50 ft. The rest of the vein is only slightly iron-oxide-stained and appears to be much less mineralized.	The main working is a shaft about 50 ft deep. About 800 ft southeast on strike is a 20-ft shaft and a nearby 5-ft-deep pit. The workings explore the two mineralized shoots.	A select sample (CRM-25) taken from the dump of the main shaft assayed no significantly anomalous metals.
286	Unnamed	0060712797 T14N R16E sec.21	A vertical 15-ft-thick aplite dike strikes N. 47° W. The dike, which is cut by a few thin quartz veins, is bounded by quartz monzonite on either side. The quartz monzonite and aplite and their debris form a 2,500-ft-long ridge a few hundred feet wide and about 150 ft high that trends southeast from a small mountain. A stockpile of about 2-3 tons comprised of muscovite-rich (50% or more) masses of altered iron-oxide-stained rock indicates that the muscovite (1-2 mm plates) was the commodity of interest. No muscovite-rich altered rock was seen in place.	A cut 35 ft long, 15 ft wide, and 12 ft high at the upslope end.	The absence of any muscovite-rich rock in place indicates that the occurrence was small and isolated. Therefore, no mineral resource is indicated. A grab sample (CRM-32) from the stockpile assayed 323 ppm molybdenum.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
287	Garvanza mine & other Cliff Canyon (properties (includes Shafer, S) Berta J Omeara, Pico Rivera CA	0060710360 T14N R15E sec.23	Shear zones containing thin quartz veins cutting Teutonia Quartz Monzonite. The main shear is 4-6 ft thick, strikes N. 60°-65° E. and dips 60° SE. The thickest vein in the main shear is reported to be 10 in. (Hewett, 1956, p. 157). The quartz monzonite is locally silicified and argillized. The veins contain sphalerite, tetrahedrite, galena, and wolframite (Hewett, 1956, p. 157, and Wright and others, 1953, Tab. List, p. 116, no. 360). Two dikes, 15-20 ft thick, that parallel the shear zone, are nearby. Other similar shear zones with quartz veins parallel with dikes, occur elsewhere in the canyon (Hamilton, 1921, p. 373 and 374, and Hamilton, 1917, p. 841).	The main shear zone is explored by two adits, at least 260 and 240 ft long, the lower adit of which contains a 50-ft winze (Wright, 1953, Tab. List, p. 116, no. 360). The lower adit is intersected at the 85-ft level by a shaft, at least 110 ft deep, that is collared at the portal of the upper adit (Mineral Survey 4317 completed May 1907). At least one shaft and one adit, both possibly on the Mojave Annex claims and four prospect pits explore other shear zones in the canyon. U.S. Bureau of Mines records indicate that 45 oz of silver and 455 lb of copper were recovered from 2 tons of ore in 1908. Small production may have also occurred in 1916, 1917, and 1920 (Wright and others, 1953, p. 121, Mojave Annex).	No resource data is known. Three samples: a select sample (CRM-69) from the dump of the upper adit assayed 0.01% antimony, 0.06% arsenic 0.13% molybdenum, 1.58 oz/ton silver, 0.09% zinc, 0.16% copper, and 0.09% lead; a chip sample CRM-67 from the back of the lower portal assayed 41 ppm tungsten, 350 ppm zinc, and 70 ppm lead; and one select sample (CRM-68) from the lower dump assayed 0.15% zinc.
288	Sack Tone  Gary and Linda Overson, Cima	0060712980 T14N R15E sec.29	Note: property is privately owned; no mineral survey was accomplished due to inability to receive entry permission from owner. Data below is from referenced literature. Joseph (1985, Plate 1) shows that the mineral property is at or near a north-trending fault contact of meta-igneous and metasedimentary rocks and Cretaceous Teutonia quartz monzonite, including skarns.	Mineral Survey 3926 (dated 22 July 1901) shows two adits and an open cut on the claim.	No resource or sample data is available.
289	Tungsten King mine	0060712981 T14N R15E sec.32	Copper, lead, zinc, and tungsten minerals developed in a skarn near a quartz monzonite-carbonate rock contact and tungsten minerals (huebnerite and wolframite in disseminations in a pegmatite dike (quartz vein ?) 25-60 ft thick and at least 1,200 ft long (Wright and others, 1953, Tab. List, p. 127).	The main working is a 45° inclined shaft possibly a few ft deep, a 70° inclined shaft, possibly 100 ft deep, and a small cut. An adit of unknown length is about 2,000 ft south of the main shaft. Wright and others (1953, tab. list, p. 127) report some small production in 1916.	A select sample (CRM-66) taken from the dump of the main shaft assayed 3.21 oz/ton silver, 0.09% tungsten, 3.83% zinc, 0.06% copper, and >1.0% lead. Resource data is proprietary.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
290	Big Hunch mine  Francis M. Brooke/B&B Mining	0060710290 T14N R15E sec.35	Evans (1986, p. 24) and Joseph (1985, p. 50) described the Big Hunch mine and surrounding area as being a porphyry molybdenum deposit with a central zone of stockwork quartz rock carrying molybdenite, pyrite, and chalcopyrite within Laramide-age quartz monzonite. The area of about 1 mi <sup>2</sup> is laced with numerous quartz veins carrying copper, tungsten, lead, zinc, fluorite, and accessory gold and silver. Some of the quartz veins are huge. The main quartz vein--explored by old workings--strikes about N. 75° W., dips 54° NE, is up to 50 ft thick and about 5 mi long (Bradley, 1943, p. 497). Minor uranium minerals have also been reported.	The main workings include a 250-ft shaft, inclined at 52°, that connects with a 143-ft adit at the 90-ft level. A flooded shaft at least 20 ft deep, and a few other minor workings are nearby. Various small prospects with a number of drill pods, dozer cuts, trenches, and small pits are located in other parts of the mineralized area.	Bureau of Land Management data infers a resource of 800 million lb of molybdenum (U.S. Bureau of Land Management, 1980, p. 103). Drilling was conducted in the 1960's by Duval Corp. and in 1981 by B & B Mining Co. and Placer Amex, Inc. (Placer Dome, Inc.). Diamond drilling of 11 holes totaled 8,653 ft of core drilling in a northeasterly trending zone containing visible molybdenite about 4,000 ft across and more than 6,000 ft long to an average depth of 787 ft. Actual surface area of the drilled zone was about 1,500 ft by 3,300 ft. Individual drill hole average assays contained from 0.004% to 0.0357% molybdenum and from 0.0038% to 0.08% copper. Area of most intense drilling with highest grades averaging 0.027% Mo and 0.016% Cu was about 1,400 ft diameter, and an estimated 47 million lbs of Mo and 28 million lbs of Cu can be inferred from this area. Three samples were taken from different locales by USBM. A select sample (CRM-52) assayed 81 ppm molybdenum and >1.0% copper; a chip sample (CRM-53) assayed 452 ppm molybdenum, and a select sample (CRM-55) assayed 626 ppm molybdenum and 0.65% copper.
291	Dorr Tungsten mine (Lighthouse) W. Baynham, C. Vanderhout	0060710367 T14N R15E sec.36	Quartz veins and associated granitic (pegmatitic?) quartz dikes that vary from 25 to 60 ft thick contain sparse huebnerite and wolframite. Sparse copper oxides also stain fractures in the granitic country rock. Numerous other quartz veins and veinlets of various attitudes cut the country rock.	Wright and others (1953, Tab. List., p. 119, No. 367) report about 1,500 tons of ore were mined in 1950-51 to be hauled to a mill at Barstow, but the grade of ore proved uneconomic. This production is probably included in the 3,000 tons of ore that U.S. Bureau of Mines records show was mined in 1951. Of the 3,000 tons, 1,281 tons were treated.	No resource data is known. A select sample (CRM-51) from the dump of the main (upper) shaft assayed 0.26 oz/ton silver, 36 ppm tungsten, 0.08% zinc, 0.07% copper, and 0.09% lead.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
292	Bronze mine (Live Oak)	0060710353 T14N R16E sec.29	A fluorite-rich, tungsten-silver-copper-zinc mineralized zone or vein, 5-8 ft wide, in Cold Springs Dolomite is near the contact with Teutonia Quartz Monzonite (Wright and others, 1953, Tab. List., p. 113, No. 353).	The main working at the Bronze mine is a 300-ft adit with a 50-ft winze and small stopes (Wright and others, 1953, p. 113). About 350 yards upslope on the other side of the drainage is a 30-ft adit. Production in 1912 yielded 24 oz silver and 204 lb lead (U.S. Bureau of Mines records). A small shipment of concentrates was also reported in 1951 (Wright and others, 1953, Tab. List., p. 113, no. 353).	No resource data is known. A select sample (CRM-42) from the dump of the lower adit assayed 1.14 oz/ton silver, 0.89% zinc, 0.83% copper, 0.04% lead, 0.05% tungsten, and >1.0% fluorine.
293	Unnamed	0060712983 T14N R16E sec.30	Two shear zones about 100 ft apart strike N. 40° W. and dip 70° SW. in quartz monzonite. The southwest shear zone, about 60 ft thick, contains several parallel quartz veins up to 3.0 ft thick. The northeast shear zone is about 15 ft thick and contains sparse thin quartz veins. The quartz veins in both shears contain sparse pyrite, sparse very small black, unidentified minerals and iron- and copper-oxide stains. Fracture surfaces in the sheared, sericitized, epoditized quartz monzonite are also coated by copper oxides in places. A probable third shear zone is a few hundred ft northwest near the contact with dolomitic limestone; it appears less mineralized; however, much vein quartz float is nearby.	Workings include a 20-ft adit, a 30-ft cut, and a pit 8 ft in diameter and 3 ft deep.	A select sample (CRM-44) from the dump of the cut on the southwest shear zone assayed 0.29 oz/ton silver, 0.29% copper, 0.14% fluorine, and 0.22% zinc.
294	Copper Queen mine	0060710014 T14N R16E sec.30	A quartz-fluorite vein containing sparse chalcopryite and pyrite along or near and parallel the contact with Teutonia Quartz Monzonite and Goodsprings Dolomite (Hewett, 1956, p. 142). The vein, a few feet to as much as 12 ft thick, strikes N. 45° E° and dips 35°-45° SE. Sparse tungsten minerals (scheelite) have also been reported (Wright and others, 1953, Tab. List, p. 7, no. 28).	Workings include three adits. The lower adit (elevation 1,900 m) is 300 ft long; the middle adit (elevation 1,950 m) is 232 ft long; and the upper adit (elevation 2,000 m) is 94 ft long. No records are known; however, the extent of the workings indicate that there may have been some production.	A select sample (CRM-43) from the dump of the lower adit assayed 1.40% zinc, 0.35% copper, 0.05% lead, and >1.0% fluorine. Resource data is proprietary.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
295	Unnamed	0060712984 T14N R16E sec.31	Sericitized quartz monzonite is cut by a shear zone, about 10 ft thick, that strikes N. 68° W. and dips 36° SW. The shear zone is occupied by at least six parallel quartz veins that range from 1.5 to 14 in. thick. The veins show a comb structure and contain voids up to 1.5 in. long partially filled by small quartz crystals and earthy iron-oxide stained material. Extremely sparse pyrite in vein quartz on dump.	An adit at least 60 ft long.	A select sample (CRM-59) from the dump assayed 1.09 oz/ton silver and 0.21% zinc.
296	Giant Ledge mine (Hard Cash) G. Anderson, Banning, CA	0060710011 T14N R16E sec.31	The patented claim group (four claims) contains two types of mineralization. In the northern part, the "Hard Cash" deposit consists of fractures at the contact of Teutonia Quartz Monzonite and limestone (Wright and others, 1953, Tab. List, p. 9 and 10, no. 24) containing thin quartz veins and sparse bunches and disseminations of pyrite, hematite after pyrite, fluorite, rare chalcopryrite, and rare small crystals of huebnerite (?). Abundant iron oxides and sparse copper oxides stain much of the mineralized rock. The southern portion of the claim group contains quartz veins that cut Teutonia Quartz Monzonite. The veins contain small amounts of pyrite, galena, fluorite, huebnerite, scheelite, and chalcopryrite. The main vein is variously reported to be from 9 to 200 ft thick, to strike northwest and dip vertical to steeply southwest (Wright and others, 1953, Tab. List, p. 9 and 10, no. 24; Hewett, 1956, p. 142; Bradley, 1943, p. 434). Joseph (1985, p. 50) suggests that the quartz veins are part of a porphyry molybdenite-copper-tungsten system centered in the vicinity of the Big Hunch mine (MILS no. 0290).	The Hard Cash workings are in two groups. The northernmost group, within about 2 acres, includes a 35-ft adit with a winze at the face, a shaft about 100 ft deep, a 20-ft adit, a 50-ft inclined shaft, a caved adit, a timbered adit of unknown length with rails, a caved inclined shaft, and a 15-ft adit with door that was probably used to store explosives. The other Hard Cash workings, about 500 ft south, includes a 20-ft shaft with a short drift at the bottom, a 50-ft adit, and a small caved adit. The workings on the quartz veins in quartz monzonite in the southern portion of the claim group include a lower 1,200-ft crosscut adit, and an upper adit with 500 ft of workings (Wright and others, 1953, Tab. List, p. 9, no. 24, and Hewett, 1956, p. 142). Several shafts and cuts also explore the veins. Wright and others (1953, Tab. List, p. 9 and 10, no. 24) reports that there may have been small production in the early 1900's. This is supported by the extent of the workings.	No resources are known. Two samples: a select sample (CRM-58) from the main dump at the Hard Cash workings assayed 0.82 oz/ton silver, 0.54% lead, 0.1% tungsten, 1.42% zinc, and >1.0% copper and a fire assayed select sample (CRM-60) from the dump of the 1,200-ft adit on the quartz vein assayed 0.20 oz/ton silver.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
297	Unnamed  Pleuss-Stauffer, Inc./Lucerne	0060712802 T14N R16E sec.28	A 15-ft stratiform section of interbedded layers, 2 in. to 3 ft thick, of siliceous limestone, limy quartzite, and a friable, pale-green schist. The layers, bounded above and below by white limestone, strike N. 5° W. and dip about 15° NE. Pyrite is found disseminated or as very thin lenses within the layers, especially in the lower 3 ft thick, iron-oxide-stained quartzose layer.	A 6-ft long adit.	A select sample (CRM-39) from a 1-ton stock pile assayed no significantly anomalous metals.
298	Pleuss-Stauffer claim group  Pleuss-Stauffer, Inc., Lucerne	0060710458 T14N R16E sec.32	Nine deposits of Paleozoic limestone overlain by Mesozoic sedimentary and volcanic rocks occur within an area of about 4 mi <sup>2</sup> (Brown, 1989, p. 277, fig. 7).	Numerous pits and cuts explore the nine deposits.	Data supplied by Pleuss-Stauffer indicates an identified geological resource of greater than 100 million tons of high-quality limestone, some of which is very pure (>98% CaCO <sub>3</sub> ) and of high brightness (88-95) (Personal communication, and Brown, H. J., 1989, p. 263-279). A grab sample (CRM-50) taken by the USBM assayed 56.03% CaO, 0.80% SiO <sub>2</sub> , less than 0.010% Fe <sub>2</sub> O <sub>3</sub> , and 43.69% L.O.I.
299	The Marble claim  Dennis Benson, Nipton, CA	0060712985 T14N R16E sec.32	Lenses of marble about 3-10 ft thick, are exposed at 10-12 locales for about 1,000 ft along the west-northwest-trending contact of underlying quartz monzonite and overlying dolomitic limestone. The marble is colored by 1/16 in. to 1.0 in. thick orange, black, and light grey bands.	One pit.	The claimant reports pieces of marble large enough for use as construction material are sparse. The marble, however, appears to have value as a lapidary material suitable for bookends, table tops, and possibly belt buckles, etc.
300	Sagamore mine  G. M. Hollingsworth	0060711382 T14N R16E sec.32	A quartz vein, about 1 to 15 ft thick and 2,000 ft long, strikes N. 70° E. to east and dips 65°-80° NW. in quartzite of the Tapeats Sandstone, Bright Angel Shale, and Goodsprings Dolomite. The vein is mostly white quartz with lenses or pods of unmineralized sphalerite, chalcopryrite, galena, and pyrite (Hewett, 1956, p. 147). Huebnerite and scheelite also occur in the vein. Three similar veins also occur in the area but are apparently less mineralized.	Workings include at least 11 shafts, 8 adits and 7 cuts. Two of the adits are reported to be 1,100 and 700 ft long (Wright and others, 1953, p. 68). Many of the shafts connect with the adits. Intermittent production from 1901 to 1951 includes 276.3 oz gold, 10,828 oz silver, 43,808 lb copper, 236,659 lb lead, and 22,500 lb zinc. An effort to mine tungsten ore on the property was reported to have been unsuccessful (Bradley, 1943, p. 437).	No resource data is available; however, base and precious metals resources, including tungsten, may exist. A select sample (CRM-49) from the dump of the main shaft assayed 130 ppb gold, 4.67 oz/ton silver, 0.70% copper, >1.0% lead and zinc and 0.06% tungsten.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
301	Sericite mine  Conservation Fund, Arlington, VA	0060710658 T14N R16E sec.29	The deposit is a bed of relatively pure sericite in a body of sericite schist. The deposit, ranging from 30 to 80 ft thick and exposed for about 600 ft, strikes N. 7° W. to N. 58° W. and dips 40° NW.	Workings consist of an open pit of about 1 acre. Several thousand tons of pyrophyllite have been mined each year for about 20 years. The mining takes place for about 1 month during the summer. Actual total production and annual production figures are unknown.	Resources total 1,385,000 tons (company-supplied data). No sample.
302	Unnamed	0060712804 T14N R16E sec.29	A 4-ft-thick pyrite-bearing quartz vein striking N. 65° W. and dipping 75° SW. in quartz monzonite. The vein for 1.5 ft adjacent to the footwall is iron-oxide-stained quartz. The center is highly silicified quartz monzonite and the vein adjacent to the hanging wall is heavily iron-oxide-stained quartz. The quartz appears highly acid-leached with numerous voids, some of which contain remnants of pyrite. Part of the quartz is red, glassy, and contains remnants of small quartz crystals. A 2-3 in. layer of black-iron and manganese along parts of the vein had the appearance of slag. The country rock in the area is highly altered and fractured.	Workings include a 20-ft adit and a 30-ft cut leading to a caved adit, estimated to be about 40 ft long.	A chip sample (CRM-41) across the vein at the cut assayed 73 ppm molybdenum.
303	Unnamed	0060712796 T14N R16E sec.28	The quartz monzonite country rock is cut by 2 aplite dikes, 1.5 and 2 ft thick, that strike N. 45° E. and dip 80° NW. and a 2-3 in. thick vertical iron-oxide-stained gouge-filled fracture that strikes N. 60° W. The fracture contains a few discontinuous quartz lenses less than 1 in. thick. The country rock is altered for about 3 in. on either side of the vein. Very sparse hematite cubes altered from pyrite are contained in the wall rock.	The main working is a dozer trench 75 ft long, 16 ft wide, and 10 ft deep. Another dozer trench, 35 ft long, 10 ft wide, and 3 ft deep is about 250 ft east.	A chip sample (CRM-31) of the gouge-filled fracture assayed no significantly anomalous metals.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
304	Gold Eagle claims  Dennis Benson, Nipton, CA	0060712982 T14N R16E sec.28	Two parallel quartz veins, 1.5 and 3.0 ft thick and about 65 ft apart, strike about N. 60° W. and dip 68° NE. in Teutonia quartz monzonite. The veins carry sparse pyrite, chalcopryite, and are stained by iron and copper oxides. A third quartz vein, a few hundred ft north-northwest, is about 6.0 ft thick and strikes N. 52° W. and dips 60° NE. It contains a few hematite cubes after pyrite. Other quartz veins in the quartz monzonite are on the property. Also on the four claims are three or more weak skarn zones carrying garnet, epidote, thin quartz veins, and rare pyrite and chalcopryite where the quartz monzonite is in contact with limestone and dolomitic limestone.	The main workings on the two parallel quartz veins include a 30-ft 68° inclined shaft, and two nearby adits--one 15 ft long and the other about 40 ft long. The 6-ft-thick vein is explored by a 30-ft cut. The three small skarns are explored by a 15-ft undercut beneath a ledge, a 3-ft-deep pit, a 5-ft and a 15-ft-long adit, a 20-ft deep shaft, and a caved adit (probably about 20 ft long).	Three samples: A select sample (CRM-57) of vein quartz from the dump of the shaft on the 3.0-ft vein assayed 0.29 oz/ton silver and 0.30% copper. A select sample (CRM-61) from the dump of the 20-ft adit in skarn, located about 800 ft west of sample site 57, assayed 0.96 oz/ton silver and >1.0% copper. A select sample (CRM-62) of copper-oxide-stained material from the dump of the 20-ft shaft in skarn, about 1,400 ft east-southeast of sample site 57, assayed 82 ppb gold, 1.34 oz/ton silver, and >1.0% copper.
305	White Dove limestone claim  Dennis Benson, Nipton, CA	0060712986 T14N R16E sec.33	White and gray Cambrian limestone is exposed on a small ridge. The limestone is bounded by Mesozoic metavolcanics and nonmarine sediments to the southeast.	Workings include a dozer pit about 25 ft wide and 10 ft deep. Several hundred feet of dozer road leads up to the pit from the Sagamore Canyon road.	A grab sample (CRM-45) assayed no anomalous metals. The tonnage of limestone on this claim alone is insufficient to be a resource unless combined with that of adjoining claims. The quality of the limestone is assumed to be comparable to that of the adjoining claims.
306	Unnamed	0060712798 T14N R16E sec.27	A gray-white, bright clay is exposed over about 2 acres and is at least 30 ft thick in places. The clay is apparently derived from rhyolite or obsidian. At least three similar exposures of clay occur within 1 mi to the southwest.	Several dozer cuts totaling about 500 ft and a small pit explore the northeasternmost deposit. Dozer cuts also explore the three clay exposures to the southwest. Some of the bentonite may have been used by local ranchers.	A grab sample (CRM-33) of clay from the northeast exposure assayed no anomalous metals. Further exploration is needed to define a clay resource for other than limited local use.
307	Erin/More-Lite mine (Castle Mountain perlite mines) Conservation Fund Arlington, VA	0060710471 T15N R18E sec.19	Perlite is exposed for 2,000 ft in a zone of Tertiary rhyolitic rocks along the northeast flank of Hart Mountain. The perlite is compact, gray, pearly rock with locally abundant geodes and chalcedony veinlets and occurs in a zone which strikes northeast and dips gently to moderately northwest.	Three open pits and several open cuts. Recorded perlite production from 1945 to 1952 amounted to 5,917 tons (USBM production records).	One select sample was taken. Sample CWC-018 had and expanded density of 3.73 lb/ft <sup>3</sup> and a compacted density of 2.66 lb/ft <sup>3</sup> . An estimated 2 million tons of perlite resources are inferred at the deposit.
308	Hats prospect	0060712966 T15N R17E sec.25	Pegmatite dikes occur in Proterozoic granite gneiss and amphibole schist.	A large bulldozed area, two trenches, and several pits.	One sample was taken. Sample CWC-004 contained 0.11% barium.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
309	Cedar Top perlite mine	0060712974 T15N R18E sec.30	Perlite occupies the central part of a circular dome of rhyolite about 400 ft in diameter, that was intruded into a moderately dipping, northeast-trending sequence of rhyolite tuff, tuff breccia, and tuffaceous sandstone. Perlite, which has well developed perlitic structure, grades into rhyolite. Joints cut the perlite, and ordinarily contain a fraction of an inch to several inches of pink montmorillonite and numerous irregular bodies and veinlets of opaline silica and aragonite. Scattered throughout the perlite are cavernous, rounded masses of spherulitic rhyolite from 1/2 in. to 3 ft in diameter (Wright and others, 1954, p. 67).	One open pit. In 1949, 300 tons of perlite were produced (USBM production records).	One select sample was taken. Sample CWC-069 indicated the perlite has an expansion density of 2.21 lb/ft <sup>3</sup> and compacted density of 3.13 lb/ft <sup>3</sup> .
310	Searchlight	0060710415 T15N R18E sec.30	Medium-grained, moderately soft, tuffaceous sandstone trending N. 55° E. is a possible source of building stone. (Wright and others, 1953, p. 141, Wright and others, 1954, p. 67).	One pit.	A large quantity of recoverable stone is present.
311	Hart Peak clay prospect Dennis Benson	0060712286 T15N R18E sec.31	Zones of hydrothermal clay alteration occur in Tertiary rhyolitic volcanic rocks.	Several bulldozer trenches and pits.	Sample CWC-005.
312	Stray Cow Well prospect	0060712961 T15N R18E sec.33	Silicified, easterly trending, shear zones are in iron-oxide-stained Proterozoic granite gneiss.	Two prospect pits.	Two chip samples (CWC-001 and CWC-002) contained no significant amounts of metallic elements.
313	Stateline prospect	0060712962 T14N R18E sec.04	Silicified and argillic altered rhyolite, tuff breccia is pyritized along a northerly trending fault.	Four shafts, one open cut, and two pits.	One chip sample was taken. Sample CWC-003 contained no significant amounts of metallic elements.
314	Quail Mine prospect	0060712963 T14N R18E sec.04	Tertiary rhyolitic volcanic rocks underlie the claim. This mining claim was located by the Rock Springs Land and Cattle Company in 1907, apparently for water rights to Quail Spring.	One open cut for water at Quail Spring.	One select sample was taken. Sample CWC-012 contained no significant amounts of metallic elements.
315	White Rose clay prospect (Sugar Daddy) Dennis Benson	0060712935 T14N R17E sec.01	Zones of hydrothermal clay alteration occur in Tertiary rhyolite volcanic rocks.	Several bulldozer trenches and pits.	Samples CWC-007, 008
316	Unknown prospect	0060712934 T14N R17E sec.12	A silicified zone strikes N. 40° E. and dips 75° NW in Tertiary rhyolite breccia.	One 8-ft adit and two bulldozer trenches.	Two select samples were taken. Samples CWC-010 and CWC-011 contained no significant amounts of metallic elements.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
317	Unknown prospect	0060712967 T14N R17E sec.12	A silicified zone trends N. 25° E. in Tertiary volcanic rocks. Heavily iron-oxide-stained hydrothermal breccias occur along the zone.	One shaft greater than 40 ft deep with sublevels, one 35-ft adit, and one pit.	One select sample was taken. Sample CWC-009 contained no significant amounts of metallic elements.
318	White Hart No. 1 ALII Enterprises, Inc.	0060712198 T14N R17E sec.12	Kaolinitic clay occurs in a zone of hydrothermally altered Tertiary rhyolitic rocks.	Several drill pads and bulldozer trenches.	Four drill holes contained from 30 ft to more than 55 ft of clay (Albert A. Lewis, 1961, unpublished consultant's report).
319	Turtle Back clay prospect	0060712287 T14N R17E sec.12	Large kaolin and montmorillonite clay deposits are present in Tertiary rhyolitic volcanic rocks heavily hydrothermally altered.	Overburden has been removed to expose clay in several large pits.	One select sample was taken. Sample CWC-049 contained 9% smectite, and 1% kaolin by x-ray diffraction analysis.
320	Unknown shaft	0060712933 T14N R17E sec.13	Iron-oxide-stained sandstone is composed of rhyolite fragments.	One shaft and one pit.	One select sample was taken. Sample CWC-050 contained 0.15% barium.
321	C-1 clay mine (Milma patented claim) The Conservation Fund Arlington, VA	0060711352 T14N R17E sec.13	Tertiary rhyolite tuffs and tuff breccia have been hydrothermally altered to clay. Altered zones contain pods of partially altered rhyolite which is mixed and ground with the commercial clay (Wright and others, 1953, p. 156).	A large open pit 400 ft long, 300 ft wide, and 50-75 ft deep. Production from 1937 to 1986 amounted to 332,000 tons of clay (USBM production records).	Minerals of the deposit are quartz, kaolinite, and possibly the zeolite mineral mordenite. The clay is a white-burning china/ball clay with good plasticity and dry strength. The softening point is cone 29, bloating begins at cone 11 to 13. The total maximum linear shrinkage is 14.8% at cone 11 (Wright and others, 1953, p. 264). An estimated 3 million tons of inferred clay resources are at the deposit (Richard Thompson, USBM geologist, 1990).
322	C and M clay mine	0060710396 T14N R17E sec.24	Layered Tertiary rhyolitic rocks contain extensive zones of hydrothermal clay alteration. Clay-rich zones contain abundant residues of partly altered rhyolite which is sometimes mixed and ground with the commercial clay material.	An area of 150 ft by 300 ft was cleared and an open pit 50 ft in diameter and 15 ft deep was exposed. Production of clay from 1954 to 1959 was 837 tons (USBM production records).	Principal minerals in the clay zone are quartz, montmorillonite, and kaolinite. This deposit is within the boundary of Viceroy Gold Corporation's proposed Castle Mountain open pit gold mine (Map no. 329).

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
323	Oro Belle mine Viceroy Gold Corporation	0060710157 T14N R17E sec.13	Quartz veins occur in north-northeast-trending, steeply dipping silicified zones in Tertiary rhyolitic volcanic rocks. Mineralization is classified as the volcanic-hosted epithermal type and gold is the major metal present. Silver content is low, and base metal sulfides are completely absent. Mineralization occurs chiefly in small hematitic, vuggy quartz veins and fractures in silicified breccias (Linder, 1989, p. 138).	A vertical shaft 700 ft deep, adit 400 ft long with many feet of crosscuts and drifts. Production amounted to 3,000 to 4,000 tons of ore, averaging 12 oz/ton gold (Wright and others, 1953, p. 51). Ore was milled at the Valley View mine.	High-grade vein material reportedly contained 3 to 10 oz/ton gold (Hewett, 1956, p. 160).
324	Mountain Top mine Viceroy Gold Corp.	0060712290 T14N R17E sec.24	Gold-bearing fracture zones occur in Tertiary rhyolitic volcanic rocks. The main vein strikes northeasterly (Ausburn, 1989, p. 107).	Several adits and shafts. Small unrecorded production occurred during the 1920's and 1930's (Ausburn, 1989, p. 99).	See Castle Mountain gold description herein (Map no. 329).
325	Hart Consolidated Viceroy Gold Corp.	0060712291 T14N R17E sec.24	Gold mineralization occurs in narrow quartz veins associated with zones of silicification and clay alteration in Tertiary volcanic rocks (Hewett, 1956, p. 161).	An adit with drifts, winzes, and raises totalling about 1,100 ft (Hewett, 1956, p. 161). This mine had production during 1907-1913, although the amount was unrecorded (Ausburn, 1981, p. 99).	See Castle Mountains gold description herein. (Map no. 329)
326	Jumbo mine	0060712975 T14N R17E sec.24	Gold-bearing fracture zones occur in Tertiary rhyolitic volcanics. The main vein system strikes northeast (Ausburn, 1989, p. 107).	Several shafts with underground crosscuts and drifts. Unrecorded production occurred during the 1920's and 1930's (Ausburn, 1989, p. 99).	See Castle Mountains gold description herein. (Map No. 329)
327	Valley View mine (Big Chief mine) Viceroy Gold Corporation	0060710195 T14N R17E sec.24	Gold-bearing alteration zones in Tertiary rhyolitic rocks strike north and dip steeply west.	A vertical shaft 200 ft deep with 3 levels (underground workings total about 3,000 ft). The mine was worked intermittently from 1913 to 1942 (Wright and others, 1953, p. 61). Ore was milled on-site; the mill was dismantled in 1951. Recorded production from 1932-1940 was 10,275 tons of ore containing 1,554 oz gold, and 697 oz silver (USBM production records).	Three select samples were taken near the site of the Valley View mine. Samples CWC-066-68 contained 678, 180, and 81 ppb gold, respectively. See Castle Mountains gold description herein. (Map No. 329)



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
328	P. S. Hart mine (Standard Sanitary)	0060710403 T14N R17E sec.24	Clay formed by hydrothermal alteration occurs along steeply dipping fractures in Tertiary rhyolite. Clay zones range from a few feet to several hundred feet wide and up to 1,000 ft long.	Early operations removed clay from a series of low-angle stopes driven eastward into a hillside. Beginning in 1948, open cut benching was employed in a quarry paralleling the hillside. Production from 1933 to 1986 amounted to 232,000 tons of clay (USBM production records).	Company samples indicate the mined clay consists of about 5% cristobalite, 50% quartz, 25% kaolinite, and 20% montmorillonite and mixed layer minerals (Heystek, 1962). An estimated 4 million tons of inferred clay resources are at this deposit (R. Thompson, USBM geologist, 1990).
329	Castle Mountains gold deposit  Viceroy Gold Corp.	0060712932 T14N R17E sec.24	Volcanic-hosted epithermal gold mineralization occurs in an area of at least 4 mi <sup>2</sup> with a vertical range of more than 1,500 ft. Gold mineralizing events occurred about 15 m.y. ago. Gold is found as relatively pure grains and as electrum and associated with pyrite grains now oxidized to iron oxides.	The Castle Mountains gold project includes more than 2,000 claims (65 mi <sup>2</sup> ) that include numerous old gold prospects of the Hart mining district. Most of these old workings consist of short shafts, adits, or trenches, but some are marked by extensive underground workings. Viceroy Gold Corporation has drilled 343,000 ft in 634 holes, and has performed geochemical surveys at the project area. Open-pit, heap leach production is planned (Linder, Harold, 1989, p. 180-181).	Viceroy has announced combined mineable and geological reserves of 40 million tons with average grade 0.05 oz/ton gold (Linder, 1989, p. 135).
330	Green Gold mine  Viceroy Gold Corp.	0060710120 T14N R18E sec.19	Gold-bearing fracture zones occur in Tertiary rhyolitic volcanics. The main vein strikes N. 35° E. and dips vertically.	Two shafts about 50 and 100 ft deep. A 30-ft shaft is on a nearby vein. Last production was 1939, when several hundred tons of gold ore were shipped (Wright and others, 1953, p. 40).	See Castle Mountains gold descriptions herein. (Map no. 329)
331	Ivanpah quarry	0060710497 T14N R18E sec.30	Felsite occurs in an extensive layer, at least 20 ft thick, as part of a series of Tertiary acidic volcanic rocks.	A quarry about 150 ft long, 100 ft wide, and a maximum of 20 ft deep. The quarry yielded a material marketed under the trade name "silica," but was actually a hard, fine-grained felsite. Several thousand tons of felsite was hauled to a Los Angeles, CA, mill, where it was ground and bagged for use as a paint extender and as a filler (Hewett, 1953, p. 197).	One chip sample was taken. Sample CWC-013 contained 81.25% SiO <sub>2</sub> , 12.04% Al <sub>2</sub> O <sub>3</sub> , 0.21% Fe <sub>2</sub> O <sub>3</sub> , 0.39% MgO, 0.31% CaO, 0.31% Na <sub>2</sub> O, 0.14% K <sub>2</sub> O, 0.08% TiO <sub>2</sub> , 0.02% P <sub>2</sub> O <sub>5</sub> , and 6.41% L.O.I.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
332	Huntington Tile clay deposit (Marie and Pomona claims)	0060711351 T14N R17E sec.25	Clay minerals formed as the result of hydrothermal alteration of Tertiary rhyolitic volcanic rocks. Principal minerals occurring in the clay zone are silica, montmorillonite, and kaolinite (Huntington Tile Inc., 1979).	Several pits and trenches.	At least 20,000 tons of commercial quality clay are identified at the site (Huntington Tile Inc., 1974).
333	Preema Hank Slepoy	0060712837 T13N R09E sec.05	A shear zone strikes N. 25° W. and dips 70° NE in phyllitic and gneissic metasediments. The zone contains quartz lenses to 0.8 ft thick and 5 ft long. Hematite stains the lens margins and fills fissures within the quartz.	Two pits	One sample (CRR-97) contained 268 ppb gold.
334	Rat Hole mine H. Slepoy	0060712782 T13N R09E sec.05	A 6.5-ft shear zone strikes N. 15° W and dipping 70° E in limestone. The iron-oxide-stained and bleached shear zone is exposed on the surface in the contact of a thrust fault dipping 25° SW. Minor secondary copper mineral staining is along fractures in limestone in the upper pit which is on a north trending fault dipping 37° to the east.	Four prospect pits.	Two samples (CRR-25, -26) ranged from 14 to 8,250 ppb gold, 1 to 2,410 ppm tungsten, and 120 to 240 ppm rubidium.
335	Soda Lake Lilburn Corp.	0060712849 T13N R08E sec.36	Soda Lake is in a northward trending basin about 12 mi long with a maximum width of 6 mi. The absence of an evaporite sequence in drill holes up to 1,070 ft deep indicates the lake drained into another basin rather than evaporating. Sediments consist of silty clays to medium sand, with lesser amounts of coarse sand and gravel (Muessig, 1957).	From 1952 to 1953 five core holes were drilled; the deepest was 1,070 ft. Lilburn Corp has drilled one 345 ft test well.	Lilburn Corp. of San Bernardino, CA is currently conducting test to recover submicroscopic gold in brine solutions pumped from Soda Lake.
336	Unknown None	0060712785 T13N R09E sec.33	Alluvium consists of fragments of monzonite in which all of the micas have been altered to chlorite.	Three bulldozer cuts in alluvium; the longest trench is 75 ft. Trenches did not reach bed rock.	One sample (CRR-2) contained 17 ppb gold and 200 ppm rubidium.
337	Unknown None	0060712784 T13N R09E sec.34	Desert placer consisting of angular granitic rock fragments up to 2 in. in diameter. The alluvial fan is about 1,000 ft long and 500 ft wide.	Five bulldozer trenches 10 ft wide by 50 ft long by 5 ft deep.	One sample contained (CRR-3) contained no detectable gold or silver.
338	Anthony Unknown	0060712783 T13N R09E sec.34	Mesozoic granitic is in contact with Devonian Goodsprings Dolomite forming a skarn. Massive epidote and fine-grained calc-silicates are along the contact. Quartz, calcite, chalcopyrite along with several secondary copper minerals are in the skarn.	Four adits (500, 50, 20, 20 ft) and one prospect pit are on the property.	Three samples (CRR-4 to 6) ranged from 5 to 120 ppb gold, and 13 to 56.4 ppm uranium, 4,600 to >10,000 ppm copper, and one contained 28 ppm silver.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
339	El Lobo mine	0060711391 T12N R09E sec.14	Chalcopyrite, malachite, and chrysocolla occur in a skarn along the contact of limestone and intrusive quartz porphyry (Sands granite of Barca, 1966). A shear zone in limestone also contains galena and a small amount of anglesite (USBM files). The shear zone can be traced for 300 ft along its northerly strike; dip is 45° N.	Two pits and a 30-ft shaft explore the copper showings; a 10-ft-long trench is on the galena occurrence.	A sample cut across 8 ft of the galena-bearing vein and enclosing limestone contained 2.65% lead (USBM file). Three USBM samples (CRR-8, -9, -10) contained from 16 to 19 ppb gold, two were >10,000 ppm copper, and one contained 44.9 ppm uranium.
340	Little Cowhole Mtn.	0060710681 T13N R09E sec.35	Massive, finely crystalline marble of the Goodsprings Dolomite is partly covered by wind-blown sand. The marble contains numerous white calcite veinlets and is brecciated in places (Barca, 1966, p. 9).	No workings or production are reported.	The marble may be marketable as terrazzo material or dimension stone (Barca, 1966, p. 9). One sample (CRR-7) contained 51.87% CaO and loss on ignition was 42.49%.
341	Unnamed prospect None	0060712786 T12N R09E sec.10	A small block of magnetite and specular hematite about 15 ft long and 5 ft wide is in alluvium.	One prospect pit.	One sample (CRR-15) contained 93.79% iron and loss on ignition was 2.55%.
342	Michele Joe Agee	0060712780 T12N R09E sec.10	A broken, fractured iron-oxide-stained, milky-white quartz vein strikes N. 70°-85° E. and dips 75° NW. to vertical in granite. The quartz vein is exposed discontinuously for 1,400 ft and cross cuts at least three andesite dikes.	One 90-ft adit and three prospect pits are on the quartz vein.	Four samples (CRR-11 to 14) contain 9 to 200 ppb gold.
343	Unnamed prospect None	0060712781 T12N R09E sec.14	Andesite dike is in contact with an iron skarn. Primary minerals are magnetite, specular hematite, and epidote; malachite, chrysocolla, and azurite are along most fractures in the skarn zone.	One 15 ft adit, a 10 ft shaft, and a prospect pit 10 ft by 20 ft are on the property.	Three samples (CRR-16 to 18) contain 44 to 376 ppb gold, 310 to 618 ppm cobalt, 240 to 20,100 ppm zinc, and 2,300 to >10,000 ppm copper.
344	Mosaic Queen	0060710680 T12N R09E sec.13	A skarn zone, exposed in an area 300 ft long and 200 ft wide, consists mainly of garnet, epidote, magnetite, and specular hematite. A light gray to pink diabase dike (Barca, 1966) is along the eastern margin of the skarn zone. The marble country rock is colored pastel brown, tan and, pink; the dike rocks are maroon, green, and gray.	One shaft 15 ft deep and two small prospect pits.	About 47 million tons of pastel marble, and 14 million tons of dike rock have been identified (Metzner, 1955). Five 1990 samples (CRR-19 to 23); two contained 8 and 425 ppb gold, one had 110 ppm silver, 3,900 ppm zinc, 2,600 ppm copper and >10,000 ppm lead.
345	Bernice Esther Maxfield	0060712806 T12N R09E sec.13	Unaltered quartz latite is medium purple, porphyritic with equal amounts of potassium feldspar, plagioclase, and quartz in an aphanitic groundmass.	One small prospect pit.	One sample (CRR-24) assayed 14 ppb gold.
346	Unnamed location	0060710705 T13N R10E sec.14	A shear zone transects and offsets a 6-ft-thick pegmatite dike in quartzite. The shear zone strikes N. 55° W. and dips 65° NE., perpendicular to the trend of the dike.	One 10-ft-deep shaft.	One sample (CRR-56) contained 14 ppb gold.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
347	Gyron (Pat and Trudy)	0060712844 T13N R10E sec.22	Sheared contacts of micaceous quartzite with dolomite and dioritic sills are locally iron-oxide-stained. Quartz stringers as much as 0.5 ft thick are along the zones; the quartz in places contains narrow veinlets of specular hematite. One pod of white marble contains epidote, diopside, garnet, and idocrase along its contact with underlying diorite.	Six bulldozer trenches are 50 to 200 ft long.	Three samples (CRR-88 to 90); two contained 20 and 98 ppb gold, and one had 460 ppm cobalt.
348	Helenbak	0060712842 T13N R10E sec.22	A quartz vein 0.8 to 2.0 ft thick extends for at least 200 ft in gneiss. The vein strikes N. 10°-40° E. and dips about 50° NW.; a subparallel vein 2.4 ft thick is exposed to the south. Another vein, 2.5 ft thick, strikes N. 75° W. and dips 30° NE.	The main vein is exposed in a 95 ft adit and in an adit above that is nearly obliterated by subsequent bulldozer work. A lower crosscut adit is 180 ft long. A 20-ft adit and two pits expose the other two veins. Small stopes and an ore chute suggest some production has occurred.	Four samples (CRR-75 and 79 to 81) ranged from 522 to 7,530 ppb gold, and one had 110 ppm cerium.
349	Gold Cycle mine (Aero Trust) (Arrow Trust)	0060710704 T13N R10E sec.23	Discontinuous shear zones in gneissic rocks (Barca, 1966, p. 81) strike N. 5°-30° E. and dip steeply northwest. The zones are as much as 11 ft thick and contain pyritic quartz veins at least 1.0 ft thick.	One 25-ft adit, four shafts 15 ft to more than 40 ft deep, and four pits. In 1939, gold and silver were extracted from 355 tons of ore from the deposit.	Five samples (CRR-60-64) assayed from 10 to 991 ppb gold, and one contained 328 ppm thorium, 110 ppm lanthanum, and 240 ppm cerium. One sample had 63 ppm cobalt.
350	Sunrise (Lost Horse)	0060710701 T13N R10E sec.23	A series of parallel shear zones strike to the northeast in granite and limestone (Tucker and Sampson, 1931, p. 331) and dip 50° NW. to 70° SE. One gouge-filled zone is at least 10 ft thick, is exposed for 400 ft along strike, and contains lenses of quartz.	Two shafts 38 and 61 ft deep, a 60-ft adit, and several pits are in the 10-ft-thick zone. Possible minor production has occurred.	Four samples (CRR-57 to 59 and 65) contained from 3 to 2,970 ppb gold, two had 130 and 220 rubidium, and 36 and 42 ppm cobalt.
351	Lady Luck (Kitty)	0060712841 T13N R10E sec.24	Steeply dipping, hematite-stained shear zones strike N. 30°-40° W. across banding in quartzite. One zone contains a narrow, pyrite-bearing quartz lens. Diorite intruding the quartzite has been argillized and chloritized.	At least nine prospect pits and one 10-ft shaft.	Three samples (CRR-72 to 74) assayed from 14 to 120 ppb gold, 20 to 87.5 ppm thorium, 19 to 160 ppm lanthanum, and 44 to 350 ppm cerium.
352	I AM No. 3	0060712840 T13N R10E sec.24	A shear zone strikes N. 47° W. and dips 60° NE in quartzite. Quartz lenses in the zone contain small amounts of pyrite.	A shaft on the shear zone is caved at 20 ft; a 15-ft shaft is nearby.	One sample (CRR-55) had 89 ppb gold.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
353	Paymaster mine (Whitney)	0060710166 T13N R10E sec.23	A series of quartz veins in granite, gneiss and schist strike N. 20°-40° E. and dip 40°-50° NW. Three main quartz veins are 200 to 300 ft apart, range from 1 to 6 ft thick, and contain pyrite, magnetite, chalcopyrite, and marcasite (Wright and others, 1953, p. 78). The main vein, the Paymaster, is exposed underground along strike for 705 ft and is stoped 275 ft to the surface in places. The Sidewinder vein is exposed at the surface and for 85 ft underground. The Discovery vein is exposed for 700 ft in surface workings and for at least 150 along dip. Yellow uranium minerals are also associated with quartz in brecciated zones (Minobras, 1978, p. 90).	Underground workings total about 2,000 ft. A main crosscut adit extends 950 ft, intersecting the Sidewinder and Paymaster veins. A series of surface workings, inclined shafts (eight) as much as 170 ft deep, and other adits (for) as much as 350 ft long also expose the veins. Production of \$50,000 to \$100,000 from the mine is reported (Tucker and Sampson, 1931, p. 330). Between 1932 and 1944, 1,023 tons of ore were mined that yielded 315 oz gold and 117 oz silver (Hewett, 1956, p. 122).	Ore mined after 1932 averaged 0.31 oz/ton gold and 0.1 oz/ton silver. Ten samples (CRR-66 to 70, 76 to 78, 82, and 98) contained from 5 to 12,100 ppb gold, and one sample had 88 ppm cerium, 25 ppm cobalt, 37 ppm lanthanum, 19 ppm scandium, and 10 ppm thorium.
354	Pythias	0060712845 T13N R10E sec.23	Quartz veins in quartzite strike from east to N. 50° E and dip 35°-75° NW. The veins are highly fractured and discontinuous and contain blebs of pyrite. The veins are 0.8 to 1.5 ft thick; none are exposed for more than 20 ft. A low-angle fault that separates the quartzite from overlying limestone is highly limonite stained.	Two adits 125 and 145 ft long, and 7 pits.	Four samples (CRR-91 to 94) assayed 28 to 7,140 ppb gold and one sample had 28.9 ppm thorium, 67 ppm cerium, and 22 ppm lanthanum.
355	La Paloma group Art and Pat Graves	0060710708 T13N R10E sec.23	A shear zone strikes N. 40° W. and dips 55° NE in quartzite. This shear zone is cut off by a vertical fault striking N. 35° E. Quartzite fragments from the shear zone contain up to about 25% magnetite. Tucker and Sampson (1931) report a quartz vein 1 to 2 ft thick containing free gold.	An adit 50 ft long and a shaft 25 ft deep explore the shear zone. In 1934, 3.42 oz of gold were recovered from 12 tons of ore.	One sample (CRR-101) assayed 4,190 ppb gold and 21 ppm tungsten.
356	Oro Fino mine Art and Pat Graves	0060710707 T13N R10E sec.23	A quartz vein in limestone and quartzite contains free gold and pyrite. The vein strikes N. 60° E. and dips 30°-60° NW. with multiple offsets from a series of small faults (Tucker and Sampson, 1943a, p. 457). The vein is exposed for 1,300 ft along strike and ranges from 3 to 6.5 ft thick (Wright and others, 1953, p. 77).	A main crosscut and drift totals 325 ft and an 87-ft raise extends to the surface (Tucker and Sampson, 1943a, p. 457). At least five shafts, each more than 50 ft deep, six adits 10 to 115 ft long, and six pits provide access to the northeast extension of the zone. Reported production totalled \$50,000 in gold (Tucker and Sampson, 1943a, p. 457). Between 1937 and 1948, 872 tons of ore yielded gold and silver.	Shipped ore averaged 0.76 oz/ton gold (Hewett, 1956, p. 122). Four samples (CRR-84 to 87) contained 899 to 17,400 ppb gold and one sample had 12 ppm tungsten and 11 ppm uranium.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
357	Hoodoo Art and Pat Graves	0060712843 T13N R10E sec.23	A shear zone contact between quartzite and pyroxenite striking N. 18° W. and dipping 73° NE. is exposed over 400 ft. Iron oxides in the shear zone range in color from pink to purple.	An adit in the shear zone is 60 ft long; a small prospect pit is near by.	One sample (CRR-83) contained 214 ppb gold, 56 ppm cobalt, and 31 ppm tungsten.
358	Black Rock	0060710709 T13N R10E sec.24	Several thorium-uranium claims were staked in Precambrian basement rocks (Barca, 1966, p. 9). Anomalous gamma radiation (34 times background levels) was detected in interlayered quartzite and biotite schist associated with andesite porphyry at one site. Shear zones locally contain quartz veinlets.	At least four pits and three bulldozer cuts are in an area 3,350 ft long and 1,000 ft wide.	Five samples (CRR-51 to 54 and 71) ranged from 4 to 1,790 ppb gold and one sample contained 4,560 ppm cerium, 16 ppm cesium, 2,150 ppm lanthanum, 480 ppm rubidium, 292 ppm samarium, 23 ppm terbium, 3,210 ppm thorium, and 43.7 ppm uranium.
359	Comet (Desert MHGB) Dale Browning & Others	0060710245 T13N R10E sec.25	Fracture zones in quartzite and dolomite (Prospect Mountain Quartzite) may contain replacements (Barca, 1966, p.8). Iron-oxidized-stained, fractured quartz contains minor amounts of galena and secondary copper minerals. Bedding in the dolomite strikes N. 86° W and dips 30° SW.	Two vertical and four inclined shafts as much as 80 ft deep were mostly developed during World War I (Wright and others, 1953, table p. 75). Production is unknown, but minor amounts were probably produced during WW I.	Lead, silver, and gold reported (Wright and others, 1953, table p. 75). One sample (CRR-1) contained 3,370 ppb gold, 311 ppm silver, and 28,100 ppm zinc.
360	Black Fox Arthur and Pat Graves	0060712846 T13N R10E sec.26	A shear zone strikes N. 45°-50° W. and dips 45°-65° NE. in altered quartzite. Garnet, idocrase, and magnetite, both in euhedral and massive crystalline forms, suggest contact metasomatism. Chalcopyrite and pyrite are in the zone; secondary copper minerals form haloes that parallel the shear.	Two short adits, each about 50 ft long expose the shear zone; a crosscut adit about 100 ft below also intersects the zone and has about 460 ft of workings.	Two samples (CRR-95 and 96) ranged from 244 to 1,280 ppb gold, 59 to 380 ppm cobalt, and 4 to 22 ppm tungsten.
361	Unnamed prospect	0060712848 T13N R10E sec.26	A quartz vein strikes N. 48° E. and dips 75° NW. in quartzite. The shear zone along the quartz is iron-oxide stained.	One shaft 15 ft deep.	Sample CRR-116 contained 13 ppb gold.
362	Brannigan East (Richette)	0060712838 T13N R10E sec.26	Bedding plane shears and fracture zones in quartzite and dolomite contain quartz veins and zones of iron oxides. One iron-oxide-stained, vuggy quartz vein strikes N. 60° W. dips 39° NE, has blebs of galena, and has minor secondary copper staining. The iron oxides range from brown to pink to purple and have varying amounts of silica; some may be a low grade of jasper.	Six adits, the longest is 50 ft, and five prospect pits are on the property. Production is reported with the Brannigan mine (0060710076). See Map No. 365, herein.	Seven samples (CRR-42 to 48) ranged from 23 ppb to 8,750 ppb gold, one had 160 ppm silver, and one sample contained 38.8 ppm scandium.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
363	Unnamed prospect	0060712839 T13N R10E sec.25	A contact zone between shaly limestone and a limestone breccia has been intruded by a dacite sill. The sill strikes N. 85° W., dips 38° SW., and has chloritic alteration. The contact is exposed for 150 ft.	Four bulldozer cuts up to 150 ft long.	Two samples (CRR-49 and 50) assayed 4 and 190 ppb gold, 8 and 17 ppm uranium, and one contained 719 ppm tungsten.
364	Sunset (Nellie Belle)	0060710702 T13N R10E sec.26	A series of parallel veins in quartzite strike N. 40°-60° E. and dip 50°-60° NW. The veins range from 1 to 8 ft thick. One vein exposed in outcrop can be traced for 3,000 ft (Tucker and Sampson, 1931, p. 331). The veins are along shear zones that are in places filled with red, earthy to siliceous hematite. Sheared contacts between quartzite units and with overlying dolomite are less mineralized.	A 110-ft-deep shaft (caved at 15 ft) is in the 8-ft quartz vein exposure (Tucker and Sampson, 1931, p. 332) which is also exposed in a 195-ft adit. Two adits 20 and 195 ft long and a 60-ft shaft expose a second vein. At least three pits and two adits less than 10 ft long are on minor structures. Given the size of the workings, there probably has been some unreported production.	Six 1990 USBM samples (CRR-41 and 111 to 115) contained from 549 to 9,540 ppb gold. Tucker and Sampson (1931, p. 332) report free gold in one vein.
365	Brannigan mine	0060710076 T13N R10E sec.26	Fracture zones in quartzite contain numerous discontinuous quartz veins that are 3 to 6 ft thick (Wright and others, 1953, p. 72). Two mineralized zones are about 1/4 mi apart. The westerly zone strikes about N. 25°-60° E. and dips steeply northwestward; maximum dimension is about 200 ft. The eastern zone trends northwestward and dips moderately to the southwest, although crosscutting shears strike N. 80° E. and dip 40°-60° NW. Multicolored sandstone also occurs in the area.	In the eastern zones, four adits are in a vertical distance of 70 ft; most production was from winzes and stopes from the upper and middle levels which are 50 to 200 ft long, respectively. The lower level extends about 540 ft; two winzes follow structures downward. Four shafts 10 to 35 ft deep and several pits are also in the vicinity. Between 1928 and 1935, several thousand tons of ore were produced that averaged as much as \$110/ton (Wright and others, 1953, p. 72). During 1938, 1939, and 1940, 51 tons of ore mined contained 59 oz gold and 20 oz silver (Hewett, 1956, p. 122). Also, several pits on the property produced a small tonnage of ornamental sandstone. In the western zone, a 250-ft drift adit has stoping upward; four other adits are each less than 50-ft long; two shallow shafts and several pits are nearby.	Ore mined after 1938 averaged 1.16 oz/ton gold and 0.4 oz/ton silver. Eleven 1990 USBM samples (CRR-99, 100, 102 to 110) ranged from 33 to 11,000 ppb gold, and two contained 199 and 299 ppm tungsten.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
366	Sweet (Reviella Claim) Judge Holland, Wind River Min.	0060710700 T12N R10E sec.03	A shear zone striking N. 30° W. and dipping vertically is exposed for about 1,400 ft. Hohne (1985, p. 8) maps this shear as the Prospect Shear Zone with Teutonia quartz monzonite breccia on the east side and Precambrian quartzite on the west side. The upper plate of the Playground Thrust Fault crops out just west of the adit. The adit has been driven in on the center of the shear zone which is fine grained limestone and quartzite that have been intensely altered by iron oxides. Colors range from yellow to pink to purple. Some bands of magnetite and hematite are within the shear zone.	One 400-ft adit, a 30-ft shaft, and two small prospect pits.	Samples CRR-37 and 40 contained 150 and 314 ppb gold.
367	Uraniacs (ODM claims) Judge Holland, Wind River Mini	0060712847 T12N R10E sec.02	Medium grained granitic rocks with equal amounts of potassium-feldspar, plagioclase, and quartz are exposed over a wide area. Some of the feldspars are beginning to alter to clay minerals.	Four bulldozer cuts about 50 ft long and 15 ft wide.	Two samples (CRR-38 and 39) contained 12 and 15 ppb gold.
368	Lucky (ODM claims) Judge Holland, Wind River Mini	0060710142 T12N R10E sec.11	A shear zone of altered gneiss and quartzite is exposed for about 3,000 ft and is from 200 to 400 ft wide near the contact of the Playground Thrust Fault. The shear zone strikes N. 70° W. and dips 60°-70° N. Chloritic and argillic alteration is pervasive throughout the shear zone; the red, pink, and purple colors are from the oxidation of pyrite. When the Lucky mine operated in the late 1930's the ore was quartz. No vein quartz was observed in place.	Three adits totaling more than 1,500 ft and several shallow pits explore the property. The longest adit is over 1,000 ft. About 1,277 tons of ore mined during 1938, 1939, and 1940 yielded 512 oz gold and 489 oz silver (Hewett, 1956, p. 122). USBM files show an additional 1,849 lb of copper and 456 lb of lead.	Ore mined after 1938 averaged 0.40 oz/ton gold and 0.4 oz/ton silver. Five samples (CRR-27 to 31); four assayed from 1,450 to 8,710 ppb gold and one had 23.7 ppm scandium.
369	Old Dad Mountain deposit (Reat, Riet)	0060710224 T12N R10E sec.13	Two principle iron ore bodies and several minor ones are in contact metamorphic replacements of limestone interbedded with quartzite near a quartz monzonite intrusion (Wright and others, 1953, p. 98). The iron ore consists of massive magnetite and hematite with about 15% combined calcite, quartz, gypsum, pyrite, chalcophyrite, and pyrrhotite. The bodies are mainly in a zone 250 ft wide and 700 ft long that is truncated on the southeast by a fault.	A lower adit is about 200 ft long; an adit 58 ft higher is about 40 ft long. A few pits are also in the area.	A resource of 400,000 to 500,000 long tons of iron ore have been identified; two samples contained 51.79% and 57.27% iron, 11.65% and 8.02% SiO <sub>2</sub> , and 0.044% and 0.068% sulfur, respectively (Lamey, 1945, p. 67). Samples CRR-34 to 36 ranged from 43.2 to 44.3% iron.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
370	Big Horn (Justrite)	0060710233 T12N R10E sec.13	An easterly trending breccia zone which dips steeply to the north contains a siliceous zone that strikes N. 30° E. and dips 40° SE. The siliceous zone is 2 to 5 ft thick and is exposed for 50 ft in one of the adits. The zone contains galena and chalcopyrite; wulfenite, vanadinite, and molybdenum have been reported.	Three adits, the longest is 75 ft, one 25-ft shaft, and three prospect pits are on the property.	Two USBM samples (CRR-32 and -33) contained 110 and 53 ppb gold, and 14 and 19 ppm uranium.
371	Golden M	0060712657 T12N R11E sec.32	A quartzose, limonitic shear zone in dolomite strikes N. 40° W. and dips 40° NE. The zone is 1 ft to 2 ft thick, extends for 60 ft underground, and is exposed at the surface about 50 ft vertically. Magnetite-epidote skarn in lenses 10 to 20 ft thick and at least 60 ft long crop out along bedding in marble that strikes N. 30° W. and dips 55° NE.	The main adit has about 150 ft of workings and a winze at least 100 ft deep; an upper adit is about 15 ft long. Two inclined shafts are 60 and 15 ft deep.	Three 1990 USBM samples (CEM 25-27): One sample of limonitic limestone contained 13,600 ppb gold (0.397 oz/ton), 24 ppm silver (0.7 oz/ton), >10,000 ppm copper (>1%), and 2,000 ppm zinc (0.2%). One sample contained 85% iron. Samples by Lana Resources, Inc., contained as much as 0.133 oz/ton gold (Gordon Ford, written commun., 1990).
372	Unknown (Indian Creek)  Unknown	0060712989 T13N R11E sec.08	Local mineralization occurs in Precambrian gneissic terrane in a 0.4 mi <sup>2</sup> knoll southwest of Indian Creek and east of a west sloping alluvial fan. A 20-ft adit at the east end of the knob followed a 1-ft-wide white quartzose pegmatite dike (strike N. 40° W., dip 62° SW.). A 100-ft adit on the southeast side of the knoll followed a 2-ft-wide fault zone (strike N. 50° W., dip 80° SW.) filled with quartz and gouge.	Seven workings, including three adits. The 100-ft-long adit along a fault zone was probably the site of minor production. A 20-ft adit at the west end of the knoll did not appear mineralized, but heavily iron-oxide-stained granite occurred in a small pit 100 ft south of the adit.	Four samples were taken: A chip sample (CTP-109) of pegmatite at the east adit contained 12 ppb gold and <2 ppb (?) silver. A random chip sample (CTP-110) of gneiss at the same adit contained <2 ppb gold and <2 ppm silver. A chip sample (CTP-111) of quartz and gouge from the portal of the southeast adit contained 11 ppb gold and <2 ppm silver. A random chip sample of iron-oxide-stained granite from the west pit contained 14 ppb gold and <2 ppm silver.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
373	MHGB claim group Dale Browning, H. Hurley Est,	0060712990 T13N R11E sec.17	Hydrothermal alteration, characterized by kaolinization, silicification, and iron and lesser cinnabar stains, occurs in Precambrian biotite hornblende gneiss and lesser granite gneiss and gneissic quartzite.	Eight pits and trenches and one 3-ft-long adit-start and an associated trench. Workings occur in three clusters. A south cluster of two pits and the adit-start is on the south side of a west extending knoll at the head of an alluvial fan. A middle cluster of two pits and a trench is 300 ft north on the north side of the knoll. A third (older) cluster is 1,200 ft northwest of the middle cluster at the top of a small knoll at an old prospector's shack.	Five samples were taken: A 4-ft vertical chip sample (CTP-58) was taken 1,600 ft N. 30° E. of the middle cluster of workings on a southeast-facing mineralized cliff wall in a large dry wash, from one of three 4-ft iron- and cinnabar-stained and kaolinized zones in gneiss; it contained 7 ppb gold and <2 ppm silver. A 1-ft chip sample (CTP-59) across a N. 40° W. (dip 85° NE.) fault zone in one of the south cluster of pits contained 180 ppb gold and <7 ppm silver. A 6-ft vertical chip sample (CTP-60) on the west rib of an adit start contained 27 ppb gold and <2 ppm silver. A 12-ft horizontal chip (CTP 61) across the SW pit in the middle cluster of pits contained 35 ppb gold and <2 ppm silver. A 2-ft chip (CTP-113) across a N. 60° E. (dip 50° SW.) shear zone in gneissic quartzite contained 14 ppb gold, <2 ppm silver, and 41 ppm tungsten.
374	Rainy Day Unknown	0060710743 T13N R11E sec.21	A 5-ft-thick hematic zone, which contains fine-grained black sulfide minerals, occurs strata-bound 10 to 15 ft above the base of a 40-ft-thick fine-grained, massive (at footwall) to thinly bedded (at hanging wall), argillaceous sandstone. The sandstone is overlain and underlain by gray limestone. These units crop out through a window of only a few acres within late Tertiary basalt.	Workings include an inclined shaft suspected to be about 30 ft deep, and a 26-ft and two 6-ft-long adits.	Three samples were taken. A 5-ft-long sample (CTP 52) taken across the zone at the shaft portal contained 92 ppb gold, 3 ppm silver, and 0.57% lead. A select grab sample (CTP 53) of black hematitic and limonitic material at the northeast end of a 45-ft trench extending from the main portal contained 1,860 ppb gold, 61 ppm silver, and >1% lead. A sample (CTP 54) of a 4-in.-thick gouge zone at the northeast corner of the inclined shaft contained 1,750 ppb gold, 8 ppm silver, and >1% lead.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
375	Mesquite R. Huntoon Est., W. Stroud	0060712991 T13N R11E sec.23	The Mesquite group is a placer claim block covering granitic and basaltic alluvium. The owners expect precious metals can be produced from heavy mineral concentrates, including gold and platinum. Concentration would be by dry techniques using a valveless pulse jet.	No workings have been installed, and no production has occurred.	One placer sample (0.006 yd <sup>3</sup> ) (CTP-124) was taken and concentrated on a Wilfley table. No free gold or platinum was observed using a binocular microscope. A split of the concentrates (CTP-124) and a split of the middlings and tailings (CTP-124a) were separately submitted for geochemical analysis. The concentrates contained 10 ppb gold, 3 ppm silver, 600 ppm cerium, 273 ppm lanthanum, and 53.1 ppm samarium. The middlings and tailings contained <2 ppb gold, <2 ppm silver, 41 ppm cerium, 19 ppm lanthanum, and 3.2 ppm samarium. No resources were identified.
376	Aiken Cinder mine Aiken Cinder Mining Company	0060712190 T13N R12E sec.08	Naturally disaggregated cinders occur within late Tertiary volcanic cinder cone. The cone surface consists predominantly of black cinders and flows, while red cinders, which result from iron being in a high oxidation state, commonly formed within the cinder cones.	Mining is mainly carried out from pits in two cones. Total production to 1990 has been about 1.43 million tons. Current production is about 25,000 tons/year, of which almost 22,000 tons is sold to the WMK cinder block plant in Las Vegas, NV; cinders from the mine make up 70% of the blocks used in construction on the Las Vegas "Strip." Remaining production is used mainly in road construction, but significant amounts are used by landscapers (Scott Nielson, oral commun., 1990).	Two samples, a predominantly red (80%) (CTP-75) and a predominantly black (95%) (CTP-76) were taken, both within the 1/4 in. to 3/8 in. size range. These samples contained 46.10% SiO <sub>2</sub> , 16.39% Al <sub>2</sub> O <sub>3</sub> , 11.17% Fe <sub>2</sub> O <sub>3</sub> , 2.09% K <sub>2</sub> O, 4.75% Na <sub>2</sub> O, 7.73% CaO, and 6.76% MgO, and 47.76% SiO <sub>2</sub> , 16.42% Al <sub>2</sub> O <sub>3</sub> , 11.12% Fe <sub>2</sub> O <sub>3</sub> , 2.04% K <sub>2</sub> O, 4.36% Na <sub>2</sub> O, 7.83% CaO, and 6.77% MgO, respectively. About 7.8 million tons of cinder resources remain at the Aiken Mine in 1990.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
377	Orion group (Rainbow Wells) Donald Sterner, Henderson, NV	0060712177 T13N R12E sec.14	A 0.5- to 4-ft-wide quartz vein(s) extends about 3,000 ft northwest, and 3,000 ft northeast of Rainbow Wells. Northwest of the wells, the vein(s) strike N. 50° W. and dip 50° NE.; southeast of the wells the vein strikes S. 43° E and dips 85° W. The vein(s) is within coarse- to medium-grained Teutonia quartz monzonite, which is iron-oxide-stained and commonly propylitically altered in the vicinity of the quartz.	An inclined shaft, 230 ft northwest of the west (Perry) residence at the wells, extends 25 ft down dip (N. 40° E.; inclined - 50°); about 300 ft west-northwest of the shaft is a 30-ft trench extending N. 30° W. [with a 1-ft quartz vein (strike N. 32° W., dip 40° NE)]; a third inclined shaft is about 750 ft west-northwest of the first shaft, and extends 30 ft N. 60° E. at -20°. Southeast of the wells, about 200 ft S. 70° E. of the east house (200 ft N. 60° E. of the Perry house), is a 6-ft-deep shaft start; a 3-ft-long (north-south) trench is located about 600 ft S. 45° E. of the shaft start.	Three samples were taken: a 4-ft chip (CTP-49) (80 ft, N. 20° E. of shaft start) southeast of the wells contained 8 ppb gold, 35 ppm molybdenum, and 6 ppm silver. A 2.5-ft chip at the shaft northwest of the Perry residence (CTP-50) contained 38 ppb gold, 10 ppm silver, and 390 ppm copper. An 8-ft chip (CTP-51) at the westernmost (N 60 E) shaft contained 3 ppb gold, 5 ppm silver, and 480 ppm zinc.
378	Mourning Dove  Donald Sterner, Henderson, NV	0060712175 T13N R12E sec.14	The 40-acre placer claim overlies an area of deeply weathered, but uneroded, coarse-grained Teutonia Quartz Monzonite. Clay minerals are pseudomorphic after feldspar and the rock disaggregates readily, and concentrates are recoverable by gravity from a water current on a sluice box or similar device. Gold may occur within as a silver- to gold-colored platy telluride mineral(s).	Workings include a 180-ft-long, 35-ft-wide, 20-ft-deep T-shaped trench, which contains a 25-ft-diameter pond. No recorded production.	No free gold was observed in one reconnaissance placer sample (CTP-48), consisting of concentrates from three level 14-in. gold pans of material (0.012 yd <sup>3</sup> ). Concentrates contained 6 ppb gold, 3 ppm silver, 220 ppm cerium, and 72 ppm lanthanum, and 209 ppm thorium. Metals were not concentrated in the middling and tailing sample split, presumably in other mineral species. Resource determination will require further work.
379	Russ	0060712773 T13N R12E sec.26	Silicified granitic rocks trending N. 20° W. traceable for about 500 ft.	Three pits.	Iron-oxide-stained silicified granitic rocks. No visible sulfides. One grab sample (CJO-9) contained 20.3 ppm gold, 288 ppm silver, and 91 ppm tellurium.
380	Green Acres	0060712772 T13N R12E sec.35	Quartz, feldspar pegmatite pod in gray granitic rocks.	One 5 ft pit.	Milky quartz and massive red-pink feldspar with minor mica. One random chip sample (CJO-8) contained 47 ppb gold.
381	Ace	0060712768 T13N R12E sec.34	Rhyolite-andesite porphyry dike contact with granite-gneiss.	Three pits up to 5 ft deep.	Milky quartz and altered feldspar. One grab sample (CJO-1) contained 460 ppm cerium, 180 ppm lanthanum, and 82 ppm thorium.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
382	Jackpot	0060710256 T13N R12E sec.35	Quartz-filled fault zone 10-15 ft wide strikes due north and dips 55° E. in quartz monzonite - An exposure 1,200 ft north is mostly fault gouge and lamprophyre dike.	One 25 ft incline dipping 50; and two small pits on same structure; 45 ft adit and 10° incline with 5 ft pit on same structure 1,200 ft north; adit, strike N. 10° W., dip 55 NE.	Quartz vein material with chrysocolla and primary sulfides. One grab sample (CJO-2) contained 1,180 ppb gold and 1,900 ppm copper.
383	Rainbow	0060712180 T13N R12E sec.36	Quartz, quartz breccia vein in gray orthogneiss and buff-brown granitic rocks. Quartz veins and silicified zone 1-3 ft wide strike N. 20° W and dip 75° NE.	One crosscut adit, one pit, one adit along strike.	Fractured quartz with visible sulfides and limonite. One grab sample (CJO-10) contained 14.3 ppm gold, 384 ppm molybdenum, 160 ppm silver, 780 ppm zinc, 2,450 ppm copper, and >1% lead.
384	Unnamed prospect	0060712774 T13N R12E sec.36	A 2- to 4-ft-wide quartz-filled shear zone is in buff-tan granitic rocks. The structure trends S. 15° E. A gray-green, fine-grained dike is within the structure.	One adit trends S. 15° E.	CJO-11 Iron-oxide-stained milky quartz with minor pyrite. One grab sample (CJO-11) contained 1,270 ppb gold.
385	Oro Y Plata (Blue Quail No. 1) Keith and Nancy Steever	0060712173 T12N R12E sec.01	A northwest-trending, steeply northeast-dipping fault zone is in gray-buff, coarse-grained granitic rocks. A gray-green, fine-grained dike is within the fault zone; some minor sulfide-bearing quartz float is present. Epidote was also seen in the float. The zone was traceable for 2,000+ ft.	Three shafts and some more recent bulldozer cuts and excavations.	Chip sample CJO-12 taken across the fault face contained 2,370 ppb gold.
386	Barts Gold Johnson Mineral & Exploration	0060712771 T12N R12E sec.02	Altered granitic rocks 1-2 ft wide along a north-trending fault dipping 75° E. contains spotty quartz and mafic dike exposures.	One adit, one shaft, one pit.	Milky quartz with pyrite, limonite, and chrysocolla. One grab sample (CJO-6) contained 6,540 ppb gold.
387	South Padday	0060712769 T12N R12E sec.11	A local area of alteration is a possible fault in granitic country rock.	Three pits.	Silicified, iron-oxide-stained, altered granitic rocks near fault contact. One grab sample (CJO-4) contained 4,350 ppb gold.
388	Gold Standard Oscar Amado	0060712171 T12N R12E sec.09	A 20- to 30-ft-wide basalt dike was intruded along a 1- to 3-ft-wide fault zone which trends northwest and dips 50° NE. Quartz breccia occurs on both footwall and hanging wall. Country rock is gray med-coarse grained granitic rock.	Two shafts, one adit, and eight pits.	Milky quartz with pyrite, galena, chrysocolla, sphalerite, and limonite. One grab sample (CJO-3) contained 31.6 ppm gold, 5,300 ppm zinc, 1,000 ppm copper, and 9,000 ppm lead.
389	Cypress	0060712770 T12N R12E sec.11	A 2-ft-wide, quartz-filled fault (striking N. 60° W. and dipping 85° SW.) is in gray, coarse-grained granitic rocks.	One shaft, 40 ft deep.	Iron-oxide-stained quartz. One grab sample (CJO-5) contained 885 ppb gold.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
390	Marl	0060712174 T12N R12E sec.12	A thrust (?) fault contact is between a dark green lamprophyre sill (?) and gray-buff med-coarse grained granitic rocks. The fault contains a 1-2 in. wide gouge zone trending north and dipping 35° E.	One east-trending incline dipping 25° E.	Scattered milky quartz with galena and pyrite (possibly chalcopyrite). One grab sample (CJO-7) contained 7,460 ppb gold, and 3,400 ppm lead.
391	B.O.	0060712775 T13N R13E sec.27	Gray and white limestone bedding 200+ ft thick is within very coarse-grained, gray-pink granitic rocks. Beds are near vertical trending north, and traceable for 2,000+ ft along the fault contact on the east side.	Two adits, two shafts, and numerous pits and bulldozer cuts.	A select grab of green copper carbonate and garnet tactite. One grab sample (CJO-13) contained 40 ppb gold, 337 ppm tungsten, 800 ppm zinc, >1% copper, and 282 ppm lead.
392	Prospect	0060712850 T11N R12E sec.10	A sheared, altered zone strikes N. 60° E and dips 45° NW. in a gneissic granitoid, locally containing pegmatitic, rocks. The zone is at least 15 ft thick and includes quartz veins as much as 2 ft thick. The zone is exposed for 800 ft along strike but thins to the northeast.	One inclined shaft 30 ft deep and two pits.	One 1990 USBM sample of stockpiled quartz vein material (CEM-28) contained no economically significant mineral concentrations.
393	Prospect	0060712662 T11N R12E sec.10	A quartz-filled shear zone in quartzite strikes N. 50° W. and dips 70° NE. The quartz contains hematite along fissures and as cubic pseudomorphs after pyrite. The shear zone is 6 ft thick; quartz veins are as much as 0.8 ft thick.	One pit.	One 1990 USBM sample (CEM-24) contained no economically significant mineral concentrations.
394	Kelgold 2-5 Johnson Exploration & Minerals	0060712184 T11N R12E sec.10	Hematitic shear zones in quartzite and thinly bedded shale and siltstone strike N. 50°-70° E. and dip 50°-70° SE. One zone, 8.6 ft thick, extends for at least 200 ft along strike and consists mainly of quartz and quartzite breccia. Sparse secondary copper minerals coat fractures in places.	Several hundred feet of bulldozer trenches, at least four drill holes (depth unknown), three pits, and one 10-ft-long adit.	Three 1990 samples (CEM-20 and CEM-22 - 23); one contained anomalous arsenic (402 ppm), but no other economically significant concentrations were detected.
395	Kelgold 12 Johnson Exploration & Minerals	0060712661 T11N R12E sec.10	Leached, hematitic quartzite and quartzite breccia along a contact with dolomite that strikes N. 40° E., and dips 90°. The hematite occurs as coatings along fissures and as pseudomorphs after pyrite.	One bulldozer trench 70 ft long.	One 1990 USBM sample (CEM-21) contained no economically significant mineral concentrations.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
396	KEL 1-2	0060712181 T11N R12E sec.10	Shear zones with narrow quartz veins strike N. 5°-10° W. and dip 70°-75° W. The shears are in pegmatite and Precambrian granitoid rocks. The veins contain pyrite; secondary copper minerals are common in shear zones.	One shaft with a drift at the 12 ft level, one sloughed shaft and four pits.	Four 1990 USBM samples (CEM 7, 8, 10, 11); one sample contained 7,310 ppb gold (0.213 oz/ton) and 14 ppm silver (0.4 oz/ton), as well as anomalous arsenic and antimony. Another sample contained 1,060 ppb gold (0.031 oz/ton).
397	Prospect	0060712658 T11N R12E sec.11	Sheared limonite- and hematite-stained contact of quartzite with overlying dolomite. Bedding in the quartzite strikes N. 40° E and dips 42° SE.	Two prospect pits.	Two 1990 USBM samples (CEM 18, 19) contained no economically significant mineral concentrations.
398	Kelgold 7-8 Johnson Exploration & Minerals	0060712659 T11N R12E sec.11	Two quartz veins in quartzite strike N. 60° E. and dip 70° NW. The veins contain pyrite, chalcopryite, hematite, and secondary copper minerals; they range from 3 to 6 ft thick. A third vein strikes N. 5° W. and dips 15° W. The quartzite strikes to the east and dips 60°-70° SE.	One crosscut adit is 185 ft long; five pits expose quartz veins.	Three 1990 USBM samples (CEM 15-17); two contained 324 and 336 ppb gold (0.01 oz/ton).
399	Kelgold 9-10 Johnson Exploration & Minerals	0060712660 T11N R12E sec.11	A sheared contact of thinly bedded quartzite and shale with overlying dolomite strikes N. 55°-80° E and dips 65°-70° SE. The shear zone is more than 6.0 ft thick in an altered zone more than 65 ft thick. The zone contains lenses of hematite as much as 10 in. thick.	Two inclined shafts are 10 and 30 ft deep. Three pits are on the shear zone; another is in fractured quartzite.	Three 1990 USBM samples (CEM 12-14); two samples contained anomalous arsenic (2,840 and 550 ppm), and one of these contained 16,000 ppm zinc and 6,100 ppm copper.
400	Limestone occurrence	0060711364 T11N R12E sec.15	Medium to finely crystalline magnesian limestone and interbedded impure limestone are in a unit 25 to 40 ft thick. The limestone forms a belt that trends east. The beds dip steeply and rest on shale which in turn rests on quartzite and pebbly quartzite (Deiss, 1943).	No workings, outcrops only.	One 1990 USBM sample (CEM-9) contained 30.81% calcium, 19.13% magnesium, and 3.48% silicon.
401	Specular	0060711571 T11N R12E sec.15	Specular hematite occurs along bedding-plane shears in medium to finely crystalline magnesian limestone. Hematite lenses strike N. 80° E, dip 69° SE, and extend for about 220 ft. The lenses are as much as 4 ft thick.	One two-level open cut and six prospect pits.	One 1990 USBM sample (CEM-2) contained 75.93% iron, 6.24% silicon, and 10.27% combined aluminum, magnesium, and calcium.
402	Prospect	0060712183 T11N R12E sec.15	Sheared, brecciated zones in quartzite below a dolomite contact contain quartz veins as much as 0.5 ft thick. The zones both follow and cross bedding; strikes are northeast and northwest; dips are eastward. The zones contain specular hematite	One inclined shaft at least 50 ft deep, five hand-dug pits, and several bulldozer trenches.	Three 1990 USBM samples (CEM 4-6), one contained 1,660 ppb gold (0.048 oz/ton) and the others, 243 and 306 ppb gold, as well as anomalous arsenic (128 and 151 ppm).



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
			in places.		
403	Prospect	0060712628 T11N R12E sec.14	A sheared limonite-stained contact of dolomite with overlying quartzite contains lenses of highly fractured quartz. The contact strikes N. 80° W. and dips 65° SW. Dacite dikes as much as 20 ft thick cut across bedding in the dolomite.	One pit and one bulldozer trench.	One 1990 USBM sample (CEM-3) contained no economically significant mineral concentrations.
404	Unnamed  Abandoned (Unclaimed) Prospect	0060712191 T13N R14E sec.03	A 10-in.-thick vertical shear zone trending N. 73° E. contains grey-green gouge. The quartz monzonite host rock on either side is fractured, epidotized, and slightly silicified for several feet.	A 10-ft-deep shaft.	A chip sample (CRM-6) assayed no significantly anomalous metals.
405	Unnamed  James Russell, Cima, CA	0060712979 T13N R14E sec.10	Quartz monzonite country rock encloses a small roof pendant of metasediments cut by a 2-ft-thick quartz vein that strikes N. 72° W. and dips 50° SW. Sparse malachite and azurite occur in thin iron- and manganese-oxide-stained streaks along the footwall and hanging wall of the vein. The owner (personal communications) reported that previous investigations noted tungsten-bearing minerals (scheelite ?) at the prospect.	A 7-ft-deep prospect pit.	A chip sample (CRM-8) of the 2-ft-thick vein in the pit assayed no significantly anomalous metals.
406	Unnamed  James Russel, Cima, CA	0060712192 T13N R14E sec.03	Vertical quartz vein, at least 2 ft thick, striking N. 55° W. in quartz monzonite. The vein is heavily brecciated in places, and the space between quartz fragments is filled by brown-black hematite and limonite. The vein can be traced for about 225 ft on the surface to where it is lost under alluvium. The quartz monzonite host rock is shattered and slightly silicified for several feet on either side of vein.	A shaft about 20 ft deep.	A grab sample (CRM-7) of vein quartz from a 1-ton stockpile assayed no significantly anomalous metals.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
407	Unnamed	0060712789 T13N R14E sec.16	A possibly circular area, a few hundred yards across of altered quartz monzonite. The quartz monzonite is stained bright red, brown, and yellow by iron oxides. Many feldspar grains are partially altered to a clay-like mineral and some are stained bright red. The quartz monzonite is highly fractured; one prominent set strikes N. 32° W. and dips 76° E. The quartz monzonite is cut by several thin quartz veins, some of which contain small vugs with quartz crystals. Some float pieces may be slightly opalized. Silicified rhyolite (?) float may indicate intrusion by Tertiary dikes. George Phelps, geologist (personal communications), suspects the altered area may be a breccia pipe.	A trench 75 ft long, 5 ft wide, and 2 ft deep.	A select sample (CRM-20) of the apparently most mineralized rock from numerous localities in the altered area assayed no significantly anomalous metals.
408	Death Valley mine James Russell, Cima, CA	0060710247 T13N R14E sec.11	The main ore bodies are two parallel northeast-trending quartz veins, about 215 ft apart, that dip moderately to the southwest. The veins, which occupy shear zones cutting granite and diorite, average 4 and 7 ft thick and one is at least 1,500 ft long. The ore minerals are principally chloro-bromides of silver, argentite, and galena (Wright and others, 1953, pp. 106 and 107). A number of other parallel shear zones cut the property, some of which are mineralized.	The two main workings are the Death Valley shaft (430 ft deep, inclined 45°-55°) which has several hundred feet of drifts, and the Arcalvada shaft (285 ft deep, inclined 70°). At least nine other shafts and numerous pits explore the property. Production from 1907-1920 and 1932 yielded about 265 oz of gold, 122,800 oz silver, and 44,140 lb lead from 4,538 tons of ore (Hewett, 1956, p. 133, and U.S. Bureau of Mines records). The owner reported additional production of 21 tons of ore in about 1983 that assayed about 1,470 oz silver and 2.1 oz gold; however, disputed smelter returns were much less.	Resources include 500 tons on the dump averaging 17 oz/ton silver and 0.10 oz/ton gold, plus 6,000 tons of broken ore in stopes, and 500 tons in blocked-out ore averaging 35 oz/ton silver and 0.12 oz/ton gold (Tucker and Sampson, 1930, p. 275-277). A grab sample (CRM-75) from a small stockpile at the mill assayed 0.57% barium, 0.18 oz/ton silver, 0.12% zinc, and 0.10% lead.
409	Unnamed	0060712652 T13N R14E sec.12	A shear zone, 4-6 ft thick, strikes N. 76° W. and dips 76° SW. in quartz monzonite. The shear zone is silicified and contains quartz veinlets, and moderate iron- and manganese-oxide staining, and thin black streaks of an unidentified, very fine-grained mineral.	A 20-ft-deep shaft and a prospect pit 36 ft apart on strike.	A select sample (CRM-14) of vein quartz and silicified wall rock from the dump of the shaft assayed no significantly anomalous metals.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
410	Unnamed Abandoned prospect	0060712196 T13N R14E sec.14	Shear zone, up to 3 ft thick, strikes N. 70° E. and dips 65° SW. in quartz monzonite. Shear is sericitized, silicified, and epidotized, and contains two gouge zones, each a few inches to 7 in. thick, and at least two quartz veins about 3 in. thick. Some limonite and manganese stains and sparse, very small, black unidentified minerals.	Two circular pits, one pit 15 ft in diameter and 3 ft deep, and the other pit about 12 ft in diameter and 5 ft deep.	A select sample (CRM-18) of quartz from the dumps assayed 0.19% barium.
411	Unnamed	0060712788 T13N R15E sec.07	An irregular and branching silicified zone about 1,000 yd long and at least 45 ft wide in places that trends about N. 70° E. up a quartz monzonite ridge. At the lower part of the ridge, the zone trends about S. 70° E. and dips 65° S. and is cut by vertical cross shears that strike N. 30°-50° E. The altered zone is characterized by intense silicification, green sericitization, kaolinization, and contains numerous iron-oxide-stained quartz veinlets, and veins up to 4.5 ft thick. Sparse pyrite and vugs with quartz crystals are rare. Bright-red to yellow-red staining is present in some silicified rocks.	Two trenches, 25 and 45 ft long, on the ridge; and a 50 ft long dozer cut in a gully.	Three samples: a chip sample (CRM-15) taken across a 4.5 ft thick quartz vein exposed at the south end of a trench assayed 31 ppm antimony and 400 ppm zinc. A select sample of quartz (CRM-16) at the trench assayed no significantly anomalous metals. A grab sample (CRM-17) of bright red-stained silicified quartz monzonite from a cross-shear assayed 0.29 oz/ton silver, 230 ppm arsenic, and 0.10% barium.
412	Big Quartz mine Dennis Benson, Nipton, CA	0060712653 T13N R15E sec.18	Two shallow-dipping pegmatites, each a few tens of feet thick and covering over 1 acre, plus several other smaller pegmatites. The pegmatites are comprised primarily of white quartz but each also contains about 10% or less feldspar in isolated bodies. Sparse molybdenite occurs in one of the pegmatites. A small area (about 15 ft in diameter) at one of the pegmatites containing brecciated quartz cemented by limonite-stained chalcedonic (?) quartz may be a small breccia pipe.	Workings consist of numerous dozer cuts across the two larger pegmatites and one pit about 15 long, 8 ft wide, and 6 ft deep at one of the smaller pegmatites. A few truck loads of crushed quartz was marketed as a decorative stone for gardens, to line driveways and sidewalks, etc., in Las Vegas in about 1972.	Four samples. A grab sample (CRM-5) of quartz containing sparse molybdenite from the largest pegmatite assayed 920 ppm molybdenum. A grab sample (CRM-3) of quartz from the largest pegmatite assayed 99.81% SiO <sub>2</sub> and 0.24% Fe <sub>2</sub> O <sub>3</sub> . Another grab sample (CRM-4) of the feldspar assayed 65.15% SiO <sub>2</sub> and 19.06% Al <sub>2</sub> O <sub>3</sub> . A grab sample (CRM-19) of the brecciated quartz assayed showed no significantly anomalous metals. Most of the quartz is unsuitable for use as a decorative or building stone due to excessive iron staining.
413	Unnamed Cottonwood Mining Co.	0060712925 T13N R15E sec.05	A vertical 1-ft-thick moderately limonite-stained quartz vein strikes N. 38° E. in quartz monzonite. The quartz vein contains sparse pyrite and hematite cubes after pyrite. One speck of bornite was seen in the vein quartz.	One small pit.	A select sample (CRM-64) assayed 530 ppm copper and 538 ppm molybdenum.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
414	Butcher Knife mine Richard Kuhlman, Trona, & Others	0060712199 T13N R15E sec.05	A marine garnet-epidote-chlorite-magnetite skarn along the contact of Paleozoic carbonate rocks and monzonite dikes contains sparse iron and copper oxides, and rare chalcopyrite and galena (Greenwood, 1985, p. 71-72).	Workings include a shaft about 30 ft deep to where it is flooded, a 15-ft shaft, and four cuts, 15 to 30 ft long. The extent of the workings indicate possible small production in the past.	A select sample (CRM-65) from the dump of the flooded shaft assayed 0.29 oz/ton silver, 2.28% zinc, and 0.85% copper.
415	Unnamed Abandoned prospect	0060712920 T13N R15E sec.16	A zone of garnet-epidote-magnetite skarn up to several tens of feet thick along the contact of a limestone roof pendant and quartz monzonite. The skarn is cut by numerous quartz veinlets of various attitudes. Very sparse malachite and azurite and iron carbonates and oxides coat some portions of the skarn. Traces of pyrite and chalcopyrite have been reported (Greenwood, 1985, p. 71),	The skarn is explored by a shaft about 20 ft deep and 2 pits. A 20-ft adit in granite about 150 ft below was probably started to intercept the skarn at depth. The skarn was not reached.	A select sample (CRM-56) from the dumps of the shaft assayed 74 ppm tungsten.
416	Unnamed Abandoned prospect	0060712201 T13N R15E sec.03	A quartz vein that strikes about N. 50° W. and dips 60°-70° SW can be traced for about 500 yd in Teutonia Quartz Monzonite. The vein is about 10 ft thick near the northwest end but pinches to about 2.5 ft thick to the southeast. The vein is moderately iron-oxide stained and contains sparse pyrite and earthy hematite in small voids. The quartz monzonite beyond the hanging wall is altered for a few tens of feet.	The only working is a N. 70° E. trending, 35-ft adit that intercepts the vein at a depth of about 20 ft.	A select sample (CRM-54) from a 5-ton stockpile assayed no significantly anomalous metals.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
417	Golden Quail mine (Gold Chief, Polaris) Golden Quail Resources Ltd.	0060710107 T13N R16E sec.18	A north-trending, steeply east dipping, shear zone 80-140 ft wide contains free gold, gold-bearing galena, possible gold-bearing pyrite, and chalcopryrite. The shear zone cuts Paleozoic metamorphosed sediments, primarily quartzites and schists, with some limestone pods and pendants, and apparently some small units of Tertiary felsite intrusions. The shear zone extends north into the Teutonia Quartz Monzonite where it contains lead-zinc-silver mineralization. To the south the shear zone is cut off at a northeasterly trending, low-angle fault contact with Tertiary volcanics. The host rock is locally highly silicified and some of the limestone is altered to jasperoid. Two quartz veins (up to 15 ft wide) occur within the shear zones.	The main working is in an open pit of about 3/4 acre. Numerous other trenches, pits, adits, and shafts explore the property. Production includes 97 oz gold recovered from 200 tons of ore in 1904, 2 oz gold from 4 tons in 1939, and about 700 oz gold from a test shipment of 6,000 tons of ore in 1987 (Personal communication, Michael Sheaffer, President, Golden Quail Resources, Ltd., March 27, 1990).	Atlas Precious Metals, Inc., reports that their drilling program has delineated a resource of 1 to 1-1/2 million tons grading about 0.06 oz/ton gold. The ore body is about 800 ft long, 100 ft wide, and 100 ft deep and is open along both dip and strike. A select sample (CRM-38) of vein quartz from the open pit assayed 0.027 oz/ton gold and 210 ppm lead.
418	Shaft	0060712972 T13N R18E sec.39	Shaft sunk in alluvial gravel along east side of Lanfair Valley.	One shaft about 40 ft deep.	The shaft was probably sunk as a water well; however, water was not reached.
419	Rico placer Jack H. Zillman	0060712970 T13N R18E sec.20	Claims located on alluvial gravel along eastern side of Lanfair Valley.	None.	None.
420	Tesoro placer (Primero placer) Jack H. Zillman	0060712969 T12N R18E sec.04	Claims are located on alluvial gravel along the east side of Lanfair Valley.	None.	None.
421	Golden Sands placer (Silver Sleeper placer) Charles E. Prigmore	0060712968 T12N R18E sec.10	Claims are located on alluvial gravel along the eastern margin of Lanfair Valley.	None.	None.
422	Hoot Owl shaft	0060712971 T12N R18E sec.42	Alluvial gravels contain cobbles of quartz vein material.	Shaft about 30 ft deep.	One select sample was taken. Sample CWC-014 contained no significant amounts of metallic elements. Shaft may have been sunk as a water well.
423	Unknown	0060712207 T12N R15E sec.01	Quartz monzonite country rock is cut by a N. 40° W. trending shear zone. The shear zone is narrow (1-2 ft) and discontinuous. Slight argillic alteration was observed along zone. No mineralization seen.	One 50-ft-long adit, one collapsed adit, and one 60-ft by 30-ft by 18-ft pit. No production.	Two samples (CTN-49, -50) of brecciated and argillically altered quartz monzonite contained 2 ppb and 150 ppb gold, 370 ppm and 150 ppm Chromium. CTN-50 contained 660 ppm barium.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
424	Barnett mine; Beverly Glen, Hamerbac (Patterson Group, Lost Mormon) Greater Western Resources	0060711112 T12N R15E sec.11	The property is underlain by a gray quartz monzonite that is cut by a N. 20° W. striking, 66° NE. dipping shear zone. The shear zone includes 2 to 7 ft of brecciated sericitized quartz monzonite, chloritized and kaolinized gouge, and quartz stringers up to 6 in. thick which carry small amounts of fine to coarse pyrite and trace amounts of chalcopryrite and galena.	Six vertical shafts, two adits, and three pits. The main shaft is reported (Tucker and Sampson, 1931) to be 320 ft deep with drifts at the 100, 200, and 300 ft levels, aggregating about 1,000 ft of workings. Intermittent production from 1911-1954 is about 150 oz gold, 475 oz silver, 12,500 lb lead, and 1600 lb copper (U.S. Bureau of Mines records).	Four samples (CTN 27-30) of brecciated quartz monzonite with quartz stringers contained 1,060 ppb to 15,000 ppb gold (avg 0.19 oz/ton) and 140 ppm to 390 ppm chromium. The vein can be traced in shallow workings for about 2,000 ft.
425	K&S mine (Moonstar) Greater Western Resources	0060712209 T12N R15E sec.14	The K&S mine explores a N. 12° W. trending, 53° NE. dipping shear zone cutting quartz monzonite. The shear zone is argillically altered, contains a 6-in. quartz vein, and varies from 4 to 6 ft in thickness. Mineralization primarily occurs along the vein footwall as limonite after pyrite, galena, and minor chalcopryrite. Fracture coating manganese oxide and malachite are present.	One open cut (35 ft by 40 ft by 30 ft deep high), and one 40-ft-long inclined shaft. No production records.	Two samples (CTN-31, -32) of brecciated and silicified quartz monzonite contained 76 ppb and 355 ppb gold respectively. CTN-32 contained 2,100 ppm barium, 47.5 oz/ton copper, and nearly 1% lead.
426	Barrett mine (American Eagle Claims) Irving Friedman	0060711146 T12N R15E sec.17	The property is underlain by porphyritic quartz monzonite, quartz diorite, and a porphyritic gabbro. A quartz vein 2.0-5.0 ft thick cuts these rocks on a N. 65°-75° E. trend. The vein dips 50° NW. and is continuous in outcrop for about 2,000 ft. The quartz is copper- and iron-oxide stained and contains small amounts of chalcopryrite. Argillic alteration was observed near the mill site.	Three shafts, four adits (longest is 75 ft), eight pits, and mill site. No production records were found.	Four samples (CTN 44-46, 48) of copper- and iron-oxide-stained quartz and one sample (CTN 47) of argillically altered quartz monzonite contained 30 ppb to 4,200 ppb gold. CTN 48 contained 133 oz/ton copper.
427	Unnamed prospect	0060712988 T12N R14E sec.23	A brown rhyolite (?) porphyry dike (strike N. 40° E., and dip 60° SW.) 8-10 ft wide is in gray, coarse-grained, granitic rocks. Sheared contact on footwall.	One incline 50+ ft deep.	Pyrite-bearing dike and granitic rocks and milky quartz from dump. One grab sample (CJO-34) contained 1,400 ppm zinc.
428	Silver Lead Spring	0060712778 T12N R14E sec.23	Quartz veins from 2 to 4 in. wide (strike N. 80° E., dip 90°) are within gray coarse-grained granitic rocks. Brown fine- to medium-grained altered dike (?) rock is on the dump, but was not seen in place.	One shaft; flooded at 12 ft depth.	Quartz and altered granitic rocks with limonite boxwork, and possible fluorite. One grab sample (CJO-30) contained 43 ppb gold, and 630 ppm fluorine.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
429	Prospect	0060712779 T12N R14E sec.23	Silicified outcrop is in gray, coarse-grained granitic rocks with no apparent structure.	One small pit.	Silicified granitic rocks with minor green copper silicate. One grab sample (CJO-31) contained 93 ppb gold, 125 ppm arsenic, 2,400 ppm barium, 50 ppm silver, 1,930 ppm copper, and 2,870 ppm lead.
430	Chicken Water Spring	0060712215 T12N R14E sec.22	A shear zone strikes N. 45° E. and dips 75° SE. in altered granitic rocks. The shear is up to 11 ft wide with alteration up to 5 ft on the hanging wall; grussy, gray granitic rocks are along the footwall.	One adit.	An 8 in. shear zone in granitic country rock. One grab sample (CJO-29).
431	Razor Back	0060712216 T12N R14E sec.21	Altered, silicified, granitic rocks are in a fault zone striking N. 70° E., dipping 55° SE. with some quartz filling. The middle adit is on an 8 in. quartz vein striking N. 63° E., dipping 55° SE. in locally grussy rocks.	Two adits, one short.	Quartz and gray silicified granitic rocks with green copper silicate. One grab sample (CJO-25) contained 1.06 ppm gold, 505 ppm antimony, 862 ppm arsenic, 37 ppm silver, and 4,700 ppm copper.
432	CJOP-14	0060712188 T12N R14E sec.30	A north-trending shear zone dipping 50° E is in coarse-grained intrusive rocks.	One 20 ft cut in hillside.	CJO-14 White-buff silicified intrusive rocks. No visible sulfides.
433	Apex	0060712189 T12N R14E sec.29	One or more shear zones up to 4 ft thick strike N. 30° E. to N. 60° E. and dip northwest in granite/gneiss country rock. The zone contains altered and decomposed granite, gouge, and brecciated quartz with limonite.	One shaft, about 50 ft deep, one adit, and three prospect pits. Two prospect pits on same structure are located about 1,500 ft west of the shaft.	CJO-15 and 16. One grab sample of quartz vein material with limonite stain and one chip sample of bleached granitic rocks and gouge.
434	Mexican Spring I	0060712219 T12N R14E sec.27	A massive, milky quartz vein (strike N. 70° W., dip 35° NE) with green CuOx, is limonite stained, and up to 10 ft thick with grussy, gray granitic rocks on the footwall. The vein crops out 2,200 ft to the east.	One 20-ft incline, two pits, two shafts, one adit.	Milky quartz with green copper silicate and limonite staining; chalcopryrite and azurite in minor amounts. Two grab samples (CJO-26, 27) contained 33 and 48 ppb gold, 291 and 1940 ppm molybdenum, 15 and 19 ppm silver, and 4,700 and 9,800 ppm copper respectively.
435	Tramway	0060712217 T12N R14E sec.33	A quartz vein in a fault (strike N. 60° E., and dip 80° SE.) is 2-3 ft wide in gray-buff, coarse-grained, granitic rock; a shaft 300 ft to the southeast is on a parallel structure.	One adit and two shafts; an additional shaft is on parallel structure to the southeast.	Iron-oxide-stained quartz with disseminated pyrite. One grab sample (CJO-17) contained 150 ppb gold and 40 ppm silver.
436	Mexican Spring II	0060712220 T12N R14E sec.27	A vertical fault zone trends S. 15° E. in weathered/altered granitic rocks. Copper minerals stain quartz outcrops 500 ft to the northeast.	One adit.	Across adit portal in altered/weathered granitic rocks. One chip sample (CJO-21).

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
437	Spica	0060712221 T12N R14E sec.34	A 1-2 ft wide quartz vein (strike N. 50° W., dip 45° NE.) is in gray locally decomposed granitic rocks. Up to 2% chrysocolla or other CuOx is in the quartz. Subparallel quartz veins are within 1,000 ft to the northwest.	Numerous bulldozer cuts are along the sub-parallel quartz veins.	Milky quartz containing 1%-2% green copper silicate and minor pyrite. One random chip sample (CJO-20) contained 10 ppb gold, 357 ppm antimony, 413 ppm tungsten, and 5,000 ppm copper.
438	Peso Plata No. 1	0060712222 T12N R14E sec.35	Silicified limestone and altered country rock are in tan, coarse-grained granitic rocks. A limestone contact striking N. 50° E., and dipping 52° SE. contains minor CuCO <sub>3</sub> minerals.	Two pits.	Siliceous limestone with spotty copper carbonate minerals. One random chip sample (CJO-19) contained 41 ppb gold, 69 ppm silver, and 600 ppm copper.
439	Silver Buddy	0060712776 T12N R14E sec.34	A silicified fault zone strikes N. 55° E. with a nearly vertical dip in gray-tan silicified intrusive rock. The fault zone is 3-5 ft wide, but is not traceable on the surface.	One 8 ft shaft.	Silicified fault breccia and quartz with copper oxides and oxidized pyrite. One grab sample (CJO-18) contained 35 ppb gold, 345 ppm antimony, 88 ppm arsenic, 42 ppm silver, and 336 ppm copper.
440	Prospect	0060711705 T12N R14E sec.35	A pyrite-, iron-oxide-, and secondary copper-mineral-bearing quartz vein occupies a fault about 550 ft long, striking N. 50°-60° E., and dipping vertical to 80° NW. The fault occurs in granitic rock 700 ft north of a contact with granite gneiss.	Two Shafts.	Five samples: no gold was detected; four contained 0.1 to 0.3 oz/ton silver; copper ranged from 0.0019% to 0.086%.
441	White Rock prospect	0060711704 T12N R14E sec.34	A white-to-gray, pyrite- and iron-oxide- bearing, 0.5- to 5.0-ft-thick quartz vein about 2,000 ft long and striking N. 20°-55° E., dipping 32°-40° NW. is in granitic rock. The vein crosses a contact where it fills local shears in granite gneiss.	Three pits.	Six chip samples taken: no gold was detected; silver ranged from 0.1 to 1.0 oz/ton in five samples; one sample contained 0.0062% copper, 0.044% lead, and 0.0013% zinc. Sample values indicate the property merits additional investigation.
442	Red Silver prospect	0060711707 T12N R14E sec.35	A 2-ft-thick quartz vein strikes N. 40°-70° E. and dips 65° NW. for at least 550 ft in granitic rock. The vein is white-to-gray, has massive to comb quartz structure, and contains 1% pyrite and galena, minor secondary copper minerals, and abundant iron oxide boxworks.	One 50-ft trench and two pits.	Of two chip and one select sample, one contained 0.01 oz/ ton gold, silver ranged from 0.7 to 3.5 oz/ton, copper ranged from 0.0021% to 0.103%, lead ranged from 0.073% to 0.67%, and zinc ranged from 0.0004% to 0.0024%. Size and persistence of the structure and the analytical values indicate the property merits additional investigation for vein-type silver resources with byproduct lead and copper.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
443	Prospect	0060711706 T12N R14E sec.34	Variably oriented, coarse grained, felsic dikes, about 4 in. thick, in deeply weathered granitic rock.	One pit.	One sample contained no gold or silver, 0.0069% copper, 0.0055% lead, and 0.0067% zinc.
444	Prospect	0060711708 T11N R14E sec.03	Two quartz veins and a quartz-bearing shear zone occur in deeply weathered Precambrian granite gneiss. One vein strikes due east and dips 60° N. and the other strikes N. 30° E. and dips 40° SE.; the shear zone strikes due east and dips 30° S. Quartz is massive, white, and contains pyrite, galena, secondary copper minerals, iron oxides, and minor boxwork structures.	One 40-ft inclined shaft and two pits.	One chip and three select samples were taken. No gold was detected. A chip and a select sample from the east-striking vein contained 2.2 and 1.8 oz/ton silver, 0.039% and 0.024% copper, 1.32% and 0.76% lead, 0.12% and 0.093% zinc, and 0.0044% and 0.0030% molybdenum. A select sample from the N. 30° E. vein contained 24.8 oz/ton silver, 0.044% copper, 0.091% lead, 0.33% zinc, and 0.0023% molybdenum. Analytical values and the nature of other properties in the vicinity indicate vein-type resources of silver, lead, and zinc may be present.
445	Regulus-Vega-Spica prospect (Silver)	0060711703 T12N R14E sec.34	Workings are on northeast-trending, southeast- or northwest-dipping shear or fault zones and quartz veins. The Precambrian host rock is deeply weathered, lenticular-to-banded gneiss near a contact with granitic rock. Most structures are strongly sheared, moderately- to intensely-silicified, iron-oxide stained, and contain disseminated pyrite, limonite after pyrite, and some galena. Vein quartz is gray to white and contains pyrite, chalcopyrite, galena, sphalerite, malachite, chrysocolla, and azurite. This 400- to 500-ft-wide zone of sheared, altered, and mineralized rock may represent a northern projection of the East Providence fault.	A caved, 40-ft vertical shaft (Silver Fox), a 10 ft vertical shaft, an inclined shaft, a 20-ft trench, and 11 pits.	Of 13 chip, 1 random chip, 3 grab, and 5 select samples taken on the property, the 4 grab and select samples taken from the dumps and stockpile of the Silver Fox shaft contained from trace to 0.07 oz/ton gold and 0.4 to 2.6 oz/ton silver. No other gold values were detected. Three select samples from a quartz vein contained 1.4, 5.5, and 24.0 oz/ton silver; however, two chip samples across the structure contained less than 1 oz/ton silver. Of 13 samples analyzed for copper, 12 contained 0.0008% to 0.89% and one contained 4.7%. Twelve of 13 samples contained 0.0027% to 4.4% lead and 0.0054% to 0.65% zinc. Significant but erratic analytical values indicate that further investigation is necessary to determine if vein-type silver, gold, copper, or lead resources are present.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
446	Sadr prospect	0060711713 T11N R14E sec.03	Quartz veins and a gouge zone are 3.5 ft thick, strike N. 60° W. and dip 60° SW. in Precambrian gneiss. Quartz and argillized gneiss contain 1% to 2% pyrite and iron oxides.	One inclined shaft caved at 10 ft.	One chip and two select samples taken; a select sample from the dump contained a trace gold, 0.2 oz/ton silver, 0.0039% copper, 0.033% lead, 0.011% zinc, and 0.028% molybdenum; a select sample from the stockpile contained no gold and 0.9 oz/ton silver; the chip sample contained no gold, 0.4 oz/ton silver, 0.051% copper, 0.299% lead, and 0.026% zinc. Analytical values and similar deposits in the vicinity indicate that further studies for vein-type silver, lead, and gold resources are warranted.
447	Prospect	0060711702 T12N R14E sec.34	A quartz vein strikes N. 78° E. and dips 60° SE. and a quartz breccia zone strikes N. 80° W. and dips 53° SW. in or near an east-trending contact zone of Precambrian granite gneiss with intrusive granitic rock. The quartz contains pyrite, minor iron oxides, and sulfide boxwork.	Three pits.	Of two chip samples, one contained 0.1 oz/ton silver; no gold was detected.
448	Prospect	0060711712 T11N R14E sec.03	A 1-ft-thick fault zone trends N. 25° E. and dips 30° NW. in Precambrian gneiss and schist. Several other fault and shear zones with various attitudes are present.	One adit 110 ft long.	One chip sample contained a trace gold and no silver.
449	Prospect	0060711701 T12N R14E sec.33	Granitic rock near a contact with gneiss hosts 1.0- to 4.0-ft-thick quartz veins in faults and shears which strike N. 55° E. to due east and dip northwest or southeast. Quartz is white-to-gray, iron-oxide stained, and contains pyrite and minor secondary copper minerals.	Four pits and a 20-ft trench.	Of a total of one select and four chip samples, the select contained trace gold and three contained 0.2 to 0.8 oz/ton silver. Two contained 0.130% and 0.184% copper, 0.0042% and 0.010% lead, and 0.0017% and 0.0010% zinc. Analytical values and the nature of other properties in the vicinity indicate that the mineralized zones should be studied in detail to determine if vein-type silver resources are present.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
450	Denib mine	0060711717 T11N R14E sec.04	A sulfide-bearing shear zone is as much as 20-ft thick, strikes N. 63°-80° E., and dips 70°-77° SE. in deeply weathered, banded gneiss and schist. The zone is argillized and contains quartz stringers and as much as 20% disseminated pyrite. Secondary, northeast-trending, northwest-dipping shear zones contain pervasive pyrite.	Two adits: the lower is a 108-ft crosscut, the upper has 151 ft of crosscuts and 190 ft of drifts with stopes. Stopes and a retort indicate probable minor production.	Eight chip and two grab samples were taken. Of the two grab samples, one contained a trace gold, 1.3 oz/ton silver, 0.063% copper, 0.59% lead, and 1.04% zinc and the other contained no gold, 0.2 oz/ton silver, and was not analyzed for other elements. Of the eight chip samples, one contained a trace gold, six contained from 0.0046% to 0.058% copper, 0.0063% to 0.214% lead, and 0.011% to 0.188% zinc. The size of the zone, stoping in the workings, and the spotty but significant analytical values indicate that further investigation may reveal silver, gold, lead, and zinc resources at depth.
451	Prospect	0060711716 T11N R14E sec.04	A N. 70°-75° E. striking, 72°-75° SE. dipping shear zone with boxwork structures is in intensely silicified granitic rock. The zone is exposed over 200 ft along strike and may be continuous with the zone at the Denib mine (Map no. 450, herein).	One 36-ft adit and a 55-ft open cut.	Two chip samples contained no detectable gold and 0.1 to 0.2 oz/ton silver.
452	Fremont-Easy Street prospect	0060711714 T11N R14E sec.03	Several outcrops of north-to-northwest-trending, mostly northeast-dipping, quartz veins and silicified shear zones are in Precambrian gneiss. Quartz is gray to white and contains from nil to abundant pyrite (none observed in higher grade samples) and minor manganese oxides.	Two 10-ft shafts and eight pits.	Of one grab and five chip samples, four contained from 0.01 to 0.45 oz/ton gold and all contained silver in the range of 0.02 to 2.5 oz/ton. One sample analyzed for base metals contained 0.020% copper, 0.51% lead, and 0.017% zinc. Erratic but significant assay values indicate this property should be studied in detail to determine whether or not vein-type gold, silver, and lead resources are present.
453	Prospect	0060711715 T11N R14E sec.03	White-to-gray-green quartz crops out in granite gneiss. One outcrop is apparently barren and the other contains galena, iron oxides, and boxwork. No structural controls are evident.	Two pits.	One grab sample contained no gold or silver and one select sample contained 0.01 oz/ton gold, 1.5 oz/ton silver, 0.021% copper, 2.59% lead, and 0.028% zinc. Analytical values and nearby deposits indicate further studies for vein-type silver, gold, and lead resources are warranted.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
454	Prospect	0060711709 T11N R14E sec.03	A northeast-trending, southeast-dipping, 20-ft-thick fault zone is in granite gneiss. The zone consists of gray-to-brown banded clay.	Two pits.	One sample contained no detectable gold, 0.2 oz/ton silver, 0.0046% copper, 0.0084% lead, and 0.014% zinc.
455	Silver Buddy mine	0060711710 T11N R14E sec.03	Granite gneiss hosts northeast-trending, northwest-dipping quartz veins, pods, and shear zones. Quartz is white to gray, iron-oxide stained, and has visible limonite after pyrite, disseminated galena, minor sphalerite, and secondary copper minerals. Boxworks are common and comb structures are rare. The main vein crops out discontinuously for 220 ft along strike and continuously 90 ft downdip, ranges in thickness from 0.1 to 2.5 ft, and may be continuous with a 240-ft shear zone.	One 90-ft adit with a raise and 55 ft of drifts, five bulldozed open cuts totalling 650 ft, two trenches, and two pits. From 10 tons (USBM statistical files) produced in 1965, 22 oz of silver, 1 lb of copper, and 142 lb of lead were recovered.	This mineral occurrence has 1,300 tons of material at 3.3 oz/ton silver and 1.24% lead. Of one select and nine chip samples taken, six chip samples on the main vein contained 0.6 to 6.9 oz/ton silver, 0.011% to 0.077% copper, 0.36% to 2.04% lead, and 0.0021% to 0.081% zinc; a select sample from the stockpile contained 0.592 oz/ton silver, 1.65% lead, and less than 1% copper and zinc. Two chip samples from other quartz outcrops contained 1.1 and 3.6 oz/ton silver. A shear zone sample contained no silver and only minor copper, lead, and zinc. The exposed vein is of limited extent but the minor past production and sporadically high sample values indicate this property may have additional silver, lead, and copper resources.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
456	Silver Buddy Prospect, south	0060711711 T11N R14E sec.02	Quartz veins, a shear zone, and a fault are in granite gneiss. The main vein crops out for 1,000 ft, strikes N. 50°-72° E., dips 43°-50° NW., and contains pyrite and galena. A N. 87° E. striking, 40° SE. dipping quartz vein of short outcrop length bears visible galena and is offset 7 ft by a north-trending, westerly-dipping normal fault. An east-trending, 65° S. dipping shear zone has blebs of galena. An epidote- and specularite-rich, skarn zone is also in granite gneiss.	Two inclined shafts and five pits.	Seven samples were taken on the property. Of three chip samples on the main vein, no gold or silver was detected and one sample analyzed contained 0.0075% copper, 0.51% lead, and 0.026% zinc. A select sample contained no gold, 0.5 oz/ton silver, 0.125% copper, 1.78% lead, and 0.53% zinc. A sample from the small quartz vein analyzed 0.1 oz/ton gold, 2.4 oz/ton silver, 0.057% copper, 2.86% lead, and 0.64% zinc. A shear zone sample contained a trace gold, 4.4 oz/ton silver, 0.023% copper, 0.291% lead, and 1.03% zinc. A sample from the skarn zone had 0.034% copper and no detectable gold, silver, molybdenum, tin, or tungsten. Sporadic but significant analytical values suggest the property merits additional investigation for silver and gold resources with byproduct lead, zinc, and copper.
457	Castor-Pollux mine (Columbia mine)	0060710244 T11N R14E sec.03	The main workings are on two or more east-northeast-trending, moderately southeast-dipping quartz veins and shear zones in Precambrian lenticular to banded gneiss above a granitic contact. Pyrite, chalcopyrite, galena, sphalerite, calcite, and occasional fluorite are associated with quartz and silicified zones. A grab sample from the dump contained as much as 30% sulfides. One vein is exposed for 500 ft along strike.	Four shafts (one is 320-350 ft deep), three adits, one trench, and three pits. In four years, from 1926-1938, a total of 142 tons (USBM statistical files) of ore containing 89.11 oz gold, 2,167 oz silver, 2,626 lb copper, and 100 lb lead were produced.	An estimated 5,600 tons of indicated and 18,000 tons of inferred, subeconomic resources, averaging 0.05 oz/ton gold and 9.1 oz/ton silver, are contained in the exposed quartz vein. Of 17 chip and random chip, 5 grab, and 2 select samples taken on the property, gold ranged from trace to 0.11 oz/ton in 13 samples and silver ranged from 0.1 to 25.2 oz/ton in 24 samples. Copper, lead, and zinc were present in moderate amounts, but less than 1% in all samples. Additional resources of gold and silver with byproduct copper, lead, and zinc may be contained in the main vein system which was in accessible.
458	Prospect	0060711720 T11N R14E sec.04	Lenticular-to-banded gneiss with iron-oxide stained quartz contains minor pyrite.	One pit.	One grab sample contained no gold and 0.5 oz/ton silver. Sample analysis suggests further studies are needed.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
459	Francis mine	0060710281 T11N R14E sec.04	The Cuyamaca vein is 5 to 10 ft thick, strikes N. 60°-70° E. and dips 65°-85° NW. in sheared, bleached, Precambrian granite gneiss vertically proximal to Mesozoic granitic rocks. The white to translucent gray, iron-oxide-stained quartz contains pyrite, limonite after pyrite, galena, chalcopryite, sphalerite, fluorite, possible scheelite and/or wolframite. The vein crops out for 1,700 ft and may continue another 800 ft along strike.	Workings include six shafts from 40 to 140 ft deep, three adits from about 30 to 120 ft long, and three pits. Production was at least 200 tons (USBM statistical files) containing 2,377 oz silver (average 11.9 oz/ton) and 10,626 lb copper (average 2.7%). Tucker (1918b) reported 500 tons produced.	Six chip, two random chip, five grab, and two select samples taken on the property. Three samples contained a trace gold. Copper, lead, and zinc values were slight to moderate, never exceeding 1% for 13 samples analyzed. Thirteen samples contained from 0.1 to 5.8 oz/ton silver with 7 ranging from 1.0 to 5.8 oz/ton. Two of 12 samples contained 0.0022% molybdenum, 6 of 11 samples contained 0.0006% to 0.0008% tungsten and 9 of 11 samples contained 0.0005% to 0.0038% tin. Fluorine ranged from 0.1% to 1.0% in five samples analyzed. Tucker and Sampson (1930) noted the overall ore grades ranged from 2 to 25 oz/ton silver, 2% to 12% copper, 1% to 6% lead, and 4% to 20% zinc. Past production, persistence of the veins, and consistently significant silver values and the presence of copper, lead, and zinc in samples indicate this property merits further investigation; individual pods may be about 5,000 to 10,000 tons.
460	Prospect	0060711718 T11N R14E sec.04	A N. 55° E. striking, vertical-dipping gray-green andesite dike and a N. 30° W. striking, 85° SW. dipping, graphic-textured dike composed of coarse quartz and potassium feldspar intrude shear zones in Mesozoic granite.	Three pits.	One chip sample contained no detectable gold or silver.
461	Prospect	0060711721 T11N R14E sec.04	A prominent, N. 60° W striking, 45° NE. dipping alteration zone containing abundant quartz and pyrite and a barren, N. 45° E. striking, 60° SE. dipping dike are in country rock. The quartz zone cannot be traced but may be related to many veins on the Confidence Copper and Francis mine properties (Map no. 459, herein).	One caved shaft and one pit.	One select sample contained no detectable gold, 0.3 oz/ton silver, 0.0053% copper, 0.0210% lead, no detectable zinc, and 0.0064% molybdenum. No gold or silver was detected in one chip sample taken on the dike.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
462	Blue Rock Nos. 1-6 mine (confidence)	0060710357 T11N R14E sec.04	Quartz veins striking N. 75° W. and dipping southwest in Mesozoic granitic rocks exhibiting sericitic alteration, are intersected by veins striking N. 75° E. and dipping 65° SE. The main vein crops out for at least 400 ft along strike, is 3 to 5 ft thick and developed to a depth of 100 ft. Quartz is massive to brecciated, white to gray, iron-oxide-stained, and has some comb structures. Pyrite, limonite after pyrite, chalcopryrite, chrysocolla, malachite, azurite, sphalerite, and wolframite were observed. Microprobe examination detected the oxides of bismuth, antimony, and lead as well as the minerals magnetite, barite, scheelite, and huebnerite with crosscutting seams of stolzite or raspite (PbWO <sub>4</sub> ).	One shallow vertical shaft, two inclined shafts (one inclined 65° S. for 100 ft), one combination adit and open cut, two 80-ft bulldozer cuts, one 40-ft open cut, a 20-ft trench, and five pits. Small shipments of tungsten ore made in 1918 (Cloudman and others, 1919, p. 849). Tucker (1921, p. 340) noted the presence of \$8/ton (\$20/oz) gold.	Four chip, one random chip, one grab, and one select sample were taken. The select contained 0.04 oz/ton gold, 34.2 oz/ton silver, 1.17% copper, and 1.2% tungsten. No other gold detected. Of the remaining samples, silver ranged from 0.1 to 3.3 oz/ton, copper from 0.0058% to 0.53%, tungsten from 0.0028% to 1.0%, lead from 0.0049% to 0.52%, zinc from 0.0047% to 0.112%, and molybdenum from nil to 0.0053%. Two samples contained 0.0006% and 0.0008% tin and four analyzed for fluorine contained 0.11% to 1.0%. The past production and analytical values of this deposit, and the nature and size of similar deposits in the area suggest that further studies for tungsten-, silver-, gold-, and copper-bearing resources at depth are warranted. Deposits may be about 5,000 to 15,000 tons but further investigation is needed.
463	Prospect	0060711756 T11N R13E sec.01	Localized, variably oriented quartz veins and silicified zones 2 to 6 ft thick occur in light green, coarse, crystalline rock intruded by rhyodacite dikes and/or sills. The crystalline rock exhibits sericitic alteration. Veins strike north, northeast, and east and dip north or east.	One adit, 15 ft long, and three pits.	Of four chip samples, one contained a trace gold, two contained 0.1 to 0.2 oz/ton silver, two contained 0.003% to 0.0069% copper and four contained from 0.0038% to 0.0054% molybdenum.
464	Prospect	0060711724 T11N R14E sec.05	About a 1-ft-thick zone of gouge and minor quartz occurs along a fault striking N. 60° E. and dipping 84° SE. in sericitically altered gneiss.	One adit, 21 ft long.	One random chip sample contained 0.0043% copper, 0.0074% lead, and 0.0083% zinc; no gold, silver, or molybdenum were detected.
465	Prospect	0060711723 T11N R14E sec.04	About N. 60° E. striking, variably-dipping, bleached, iron-oxide stained, silicified shear zone and fault gouge 1 to 6 ft thick in gneiss; minor iron sulfides noted in crosscutting quartz vein 6 in. thick at workface. May be related to a breccia pipe a few hundred feet west of the portal.	One adit, 160 ft long.	Of six chip samples, three contained 0.1 to 0.2 oz/ton silver, two contained 0.0017% and 0.0041% lead, and six contained 0.0055% to 0.027% copper and 0.012% to 0.075% zinc. Higher values from vein at working face.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
466	Fanny No. 2 prospect	0060711725 T11N R14E sec.04	Two silicified fault or shear zones strike N. 70° E. and dip 52° SE. to vertical in gneiss; the zones are silicified, iron-oxide stained, and contain massive to brecciated quartz with sericite.	One adit, 6 ft long, and one pit.	Of two chip samples, one contained 0.02 oz/ton gold and two contained 0.1 and 0.5 oz/ton silver; one sample had 0.0029% copper, nil lead, 0.0021% zinc, 0.02% molybdenum, and 0.0006% tungsten. Gold and silver analyses indicate that the property merits further investigation for resources.
467	Prospect	0060711726 T11N R14E sec.04	A 4-ft-thick shear or fault zone containing a quartz vein strikes N. 70° E. and dips 78° SE. in altered gneiss; quartz is translucent gray with minor limonite after pyrite and the gneiss is sheared, bleached, altered to sericite and chlorite and contains abundant boxwork.	One inclined shaft 26 ft deep.	One grab sample from the dump contained 0.02 oz/ton gold, 0.4 oz/ton silver, 0.015% copper, 0.0094% lead, and 0.0095% zinc. Mineralization and alteration indicate that further studies for vein-type gold resources are warranted.
468	Monte Video prospect	0060711722 T11N R14E sec.04	Variably oriented, white-to-gray, iron-oxide stained quartz veins occur in localized shear zones in weathered, friable lenticular to banded gneiss. The quartz contains minor pyrite and boxworks; fluorite was observed in quartz porphyry in one adit.	Two adits (8 ft and 70 ft) and 14 pits.	Seven chip and two select samples: one sample contained a trace gold; six contained 0.1 to 0.2 oz/ton silver; four samples contained 0.0006% to 0.0026% copper, nil to 0.014% lead, and nil to 0.0054% zinc. One of three samples analyzed contained 0.0016% molybdenum; two samples contained 0.0010% and 0.0020% tungsten, and nil and 0.0005% tin; one sample analyzed for fluorine contained 0.40%. Analytical values are low but the presence of gold and silver indicate that further studies are warranted.
469	Prospect	0060711731 T11N R14E sec.02	A 2-ft-thick, quartz-rich structure (shear?) strikes N. 75° W. and dips 40° SW. in buff-to-brown, medium-grained granite gneiss; extent of the structure is unknown.	One shaft and two pits.	One chip sample taken contained 0.21 oz/ton gold and 1.0 oz/ton silver. Although the extent of the structure is unknown, the sample analysis and the proximity of significant deposits to the west indicate the property merits further investigation.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
470	Dixie No. 2 prospect	0060711730 T11N R14E sec.03	Two shear or fault zones occur in granite gneiss. The main shear zone consists of gray quartz and fault gouge trending east and dipping 60°-85° S., crops out for 350 ft along strike, and averages 3.4 ft thick. Quartz and pyrite are abundant along with minor galena and sphalerite, and traces of argentite, chalcocite, and barite. Gneiss near the vein is bleached and exhibits sericitic alteration. A localized, north-trending shear zone is 400 ft north of the main zone.	A 56-ft adit, a 10-ft shaft, and five pits on the main shear zone; one pit on the shear zone.	The main shear zone contains an inferred subeconomic resource of about 17,000 tons at an average grade of 0.01 oz/ton gold and 1.0 oz/ton silver. Eight of nine samples from the main shear zone contained 0.0019% to 0.011% copper, 0.012% to 0.059% lead, and 0.0031% to 0.0071% molybdenum. Three samples contained 0.021% to 0.35% zinc. No gold or silver were detected in the localized shear zones. Sample analyses and the extent of the vein indicate that additional gold and silver resources may be associated with the deposit.
471	Prospect	0060711734 T11N R14E sec.04	Two silicified zones: the first, a felsic dike, strikes N. 32° E. and dips 65° SE., and the other strikes N. 20° E. and dips 80° SE. in gneiss. Dike is gray to brown, medium-grained, quartz-rich, and contains iron oxides and boxwork structures.	Two pits.	A chip sample from the silicified dike contained 0.03 oz/ton gold and 1.8 oz/ton silver, and a dump grab from the silicified zone in gneiss contained 0.5 oz/ton silver. Copper values were 0.033% and 0.0092%, lead values 0.236% and 0.062%, and zinc values 0.019% and 0.0020%, respectively. Although no resource is identified, assay values indicate the property merits further investigation for gold and silver resources.
472	Rex Nos. 1 and 2 prospect	0060711727 T11N R14E sec.04	Northeast-trending, vertical- to southeast-dipping silicified zones in granite gneiss are 3 to 9 ft thick. Gneiss is fractured and foliated; silicified zones are formed by quartz vein swarms and by silica replacement of altered gneiss. One zone crops out for 100 ft.	One 20-ft-long adit, one 15-ft-long trench, and two pits.	Three chip samples contained 0.1 to 0.2 oz/ton silver, 0.0073% to 0.021% copper, 0.0021% to 0.028% lead, and 0.0040% to 0.043% zinc.
473	Prospect	0060711728 T11N R14E sec.04	Workings expose 3- to 6-ft-thick, fine- to medium-grained, quartz latite dikes (?) in two northeast-trending, southeast-dipping and one northwest-trending, northeast-dipping shear zones in granite gneiss. Zones are silicified, iron-oxide stained, and contain quartz veinlets, sericite, and abundant pyrite with minor galena. The extent of the system of veins and dikes is unknown.	One short adit, one shallow shaft, and three pits.	Of two chip and two select samples, gold was detected in two samples, trace and 0.05 oz/ton. Silver ranged from 0.3 to 2.0 oz/ton, copper from 0.0053% to 0.095%, lead from 0.0036% to 0.020% and zinc from 0.0032% to 0.094%. The intensity and type of alteration and the gold and silver values indicate that the property merits additional study.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
474	Prospect	0060711729 T11N R14E sec.03	Two quartz-bearing fault zones occur in granite gneiss. The main zone strikes N. 60° W., dips 55°-80° NE., averages 6.4 ft thick, and is inferred for 350 ft along strike. Quartz is white to gray, iron-oxide stained, and contains sulfide stringers, limonite after pyrite, and secondary copper minerals. Fault gouge is gray-green and silicified and gneiss near the zone is bleached. A second quartz vein, which crops out 300 ft south of the main zone, strikes north, dips 30° E., and is 5.5 ft thick.	One flooded adit of unknown length and three pits.	The deposit contains an inferred subeconomic resource of about 35,000 tons at an average grade of 0.04 oz/ton gold and 0.6 oz/ton silver. Of one chip sample from the north-striking vein and a select and five chip samples from the main vein, all but a select sample from the dump contained gold and all contained silver. Five samples contained 0.0046% to 0.0270% copper, 0.0440% to 0.27% lead, 0.0007% to 0.0400% zinc, and 0.0033% to 0.0420% molybdenum. Alteration, size of exposed deposit, and analytical values indicate additional vein-type gold and silver resources may be present.
475	SS No. 28 prospect, north	0060711732 T11N R14E sec.04	A 2- to 10-ft-thick zone of quartz, quartz-sericite, and gouge strikes N. 45° E. and dips 74°-90° NW. in a fine- to medium-grained, silicified, intensely sericitized, felsic igneous dike or plug which has intruded granite gneiss. The zone averages 3.2 ft thick, crops out for 270 ft along strike, has a 96-ft vertical exposure, and horsetails to the north. The quartz-sericite zone also contains minor potassium feldspar, 3% to 5% euhedral pyrite, and 1% to 3% jarosite after pyrite.	An 80-ft adit with a 5-ft winze and a 16-ft raise to the surface.	The deposit contains an inferred subeconomic resource of about 10,000 tons at an average grade of 0.02 oz/ton gold and 0.9 oz/ton silver. Six of nine chip samples contained gold, which ranged from trace to 0.07 oz/ton, and seven samples contained silver, which ranged from 0.1 to 3.5 oz/ton. Copper values ranged from 0.0055% to 0.114%, lead ranged from 0.0021% to 0.042%, and zinc ranged from 0.0020% to 0.022%. The sample analyses and the geologic environment indicate that additional resources of vein-type gold and silver may be present.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
476	SS No. 29 prospect, north	0060711733 T11N R14E sec.04	A northeast-trending, northwest-dipping, 1- to 5- ft-thick zone of gray to buff quartz and intensely bleached, silicified gneiss with some gouge and disseminated sulfides cuts gneiss for 190 ft. The country rock is very friable and altered, and may be intruded by and interfingered with intensely altered felsic volcanic rock.	Two adits, 115 ft and 52 ft long, one open cut and one pit.	The deposit contains an indicated subeconomic resource of 3,000 tons and an inferred subeconomic resource of 12,000 tons both at an average grade of 0.05 oz/ton gold and 1.7 oz/ton silver. One select, one random chip, and 14 chip samples were taken. Ten contained detectable gold, values ranged from 0.01 to 0.21 oz/ton, and all contained silver, values ranged from 0.2 to 3.5 oz/ton; copper values ranged from 0.019% to 0.28%, except one at 1.39% copper, and lead values ranged from 0.0021% to 0.48%; 10 samples contained from 0.0023% to 0.0044% molybdenum and 3 of 11 samples analyzed for tungsten contained from 0.0006% to 0.0220%. The significant sample analyses, the prominence of the vein, and the proximity of other notable properties suggest the present of additional gold and silver resources. Persistent anomalous molybdenum values indicate further studies are warranted.
477	Prospect	0060711758 T11N R13E sec.12	Multiple, white, iron- oxide-stained quartz veins totaling 0.7 ft thick occur in a fault gouge zone striking N. 70° E. and dipping 65° NW. in gneiss exhibiting sericite and chlorite alteration. Quartz contains fresh galena, limonite after pyrite, secondary copper minerals, and manganese- oxide crusts.	One inclined shaft 10 ft deep.	One chip sample contained 0.017 oz/ton gold and 0.36 oz/ton silver, 0.041% copper, 0.84% lead, 0.0045% zinc, and 0.0077% molybdenum. Sample analysis indicates that further investigation for gold and possibly silver and lead is warranted.
478	Terry placer prospect	0060711757 T11N R14E sec.08	Fluvial sediments from Globe Canyon are composed of gneissic pea gravel and 2% black sands. Wash commonly has only a thin veneer of alluvium over bedrock. Claim located in 1980.	One pit to bedrock. An attempted sluicing operation apparently failed.	One 0.38 ft <sup>3</sup> reconnaissance pan sample contained four bright, subangular to subrounded, chunky fragments of gold for a total of 0.020 mg. Value is estimated at \$0.02/yd <sup>3</sup> at a gold price of \$400/oz.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
479	SS No. 40 prospect	0060711652 T11N R14E sec.08	A poorly exposed shear zone in quartz-rich gneiss is exposed in a 6-ft-deep pit. The zone is 8 ft thick, strikes N. 70° W. and dips 70° NE. Quartz stringers 1/2 to 1 in. thick extend into country rock from the shear zone. A 2-ft-thick quartz vein and a 3-ft-thick zone of iron-oxide stained schist are exposed.	One caved adit and two pits.	A chip sample across the 8-ft shear contained a trace gold and 0.04 oz/ton silver. The quartz vein contained 0.5 oz/ton silver and no gold. The iron-stained schist contained 0.006 oz/ton silver and no gold.
480	SS No. 38 prospect	0060711654 T11N R14E sec.08	An adit trending S. 20° W. in weathered, well fractured biotite schist was probably intended to crosscut a 30-ft by 40-ft by 5-ft-thick massive white quartz outcrop 200 ft to the southwest.	One 20-ft adit.	One grab sample from the quartz pod contained 0.035 oz/ton silver; no gold detected.
481	SS No. 36 prospect	0060711653 T11N R14E sec.08	A light pink, quartz-rich intrusive rock is partially altered to a soft punky material.	One pit.	A 3-ft chip sample contained 0.003 oz/ton silver.
482	SS No. 18 prospect, south	0060711737 T11N R14E sec.09	A prominent, intensely silicified, altered outcrop as much as 17 ft thick strikes N. 75° E. and dips 65° NW. in gneiss. It appears to be intruded by a felsic dike containing quartz veins with some intergrown potassium feldspar; sericite and iron oxides were observed. The structure crops out for about 100 ft.	None.	Three chip samples across the outcrop; copper ranges from 0.0034% to 0.0170%, zinc ranges from 0.0043% to 0.0050%, and molybdenum ranges from 0.0011% to 0.0022%.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
483	SS No. 17 prospect, south	0060711736 T11N R14E sec.08	A prominent outcrop, about 100 ft in diameter, contains three distinct composition and alteration zones. A 30- by 40-ft outcrop on the south consists of a network of massive, white, ring and radial quartz veins with minor molybdenite rosettes, fresh pyrite, boxwork structures, and cubic molds after pyrite containing residual sulfur. A lenticular 100 by 30 ft zone consists of subequal amounts of quartz and muscovite; grain size ranges from 1/32 in. to 1/4 in. The largest zone consists predominantly of quartz veins and breccia with about 25% sericite. Proton magnetometer surveys in the area show this outcrop to be near the center of a 200-300 gamma low indicating leaching of magnetite from the rock. The outcrop may be a breccia pipe.	One prospect pit on outcrop.	Five samples taken. Two random chip samples, one each of the quartz-muscovite and the quartz breccia with sericite, contained 0.0077% and 0.0050% molybdenum, 0.0010% and 0.0013% zinc, and 0.072% and 0.062% fluorine. A select sample from a radial vein contained 0.002 oz/ton gold, 0.0620% lead, 0.0250% molybdenum, 0.0006% tungsten and 0.024% fluorine, and a select sample from a ring vein contained 0.002 oz/ton gold, 0.0007% zinc, 0.0062% molybdenum and 0.010% fluorine. A select sample of quartz with molybdenite rosettes contained 0.0570% molybdenum. The sample values for molybdenum and fluorine, the alteration, and the geologic setting indicate the property merits additional investigation to determine if molybdenum resources of the stock, plutonic, or Climax type (after Westra and Keith, 1981, p 852) are present at depth.
484	SS Nos. 17-19 prospect, north	0060711735 T11N R14E sec.09	Two east-trending mineralized structures and several small shear zones cut altered silicified gneiss and are related to mineralized felsic volcanic rocks which exhibit sericitic alteration. A 2.0- to 3.5-ft-thick quartz vein crops out for 200 ft and dips steeply to the north. A 4- to 10-ft-thick, 110-ft-long massive stratiform body is composed predominantly of a yellow, red, brown, and black iron-oxide replacement and is interfingering with quartz veinlets and silicified gneiss. It is underlain by altered, punky gneiss and overlain by felsic rock exhibiting quartz-sericite alteration. Halotrichite ( $\text{FeAl}_2(\text{SO}_4)_4 \cdot 22\text{H}_2\text{O}$ ) has weathered from the massive, oxidized, iron body.	Four adits, a caved shaft, two pits, and a trench; one adit is flooded, one is 20 ft long, one is 26 ft long with a winze, and one has 70 ft of crosscut and 40 ft of raise to two inclined shafts. Three holes were drilled on the property.	Of 16 chip, 3 random chip, and a select sample, 6 contained detectable gold, from a trace to 0.03 oz/ton, and 13 contained silver, from 0.039 to 1.4 oz/ton. Copper ranged from 0.0054% to 0.055%, lead from 0.0027% to 0.33%, and zinc from 0.0010% to 1.16%; six of seven samples contained from 0.0036% to 0.031% molybdenum, and one sample from the stratiform body contained 25% iron. The higher gold and silver values are from the quartz vein while the higher molybdenum values are associated with the stratiform body. Significant sample values for gold, silver, zinc, and molybdenum, and similar deposits with resources in the area, indicate the property merits additional investigation.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
485	SS Nos. 20-22, 27-29 mine, south (S)	0060710186 T11N R14E sec.09	Three prominent, subparallel quartz veins and several smaller veins strike N. 50°-70° E., dip northwest or southeast and cut gneissic and schistose rocks altered to potassium feldspar, quartz, albitized plagioclase, sericite, chlorite, and calcite. Vein systems occupy probable drag-induced faults and fissures caused by movements of the East Providence fault on the east side of the property. The large veins crop out for 250 to 1,350 ft and are 0.6 to 8.0 ft thick. Quartz is white to gray, massive to brecciated, iron-oxide stained and contains boxworks, limonite after pyrite, calcite, and rare galena.	Three adits, ranging from 8 to 175 ft with a 20-ft drift, three inclined shafts 10 to 40 ft deep, a flooded shaft, a caved shaft, two trenches, and 16 pits. Production from the Star mine was 7.26 oz gold in 1898 and 9.67 oz gold in 1901 (USBM statistical files). Wright and others (1953) noted a small shipment in 1914-1915.	Thirty chip, 5 random chip, 6 grab, and 1 select sample taken. Of 16 with detectable gold, 5 contained a trace and 11 contained 0.01 to 0.06 oz/ton. Twenty-five samples with detectable silver were in the range of 0.052 to 3.2 oz/ton; 7 were >1 oz/ton. Of those analyzed, copper ranged from 0.0010% to 0.239%, lead ranged from 0.0021% to 0.67%, and zinc ranged from 0.0004% to 1.2%; only one exceeded 1% zinc. Molybdenum ranged from 0.0017% to 0.032% and 5 of 26 analyzed for tungsten contained 0.0006% to 0.0028%. Significant analytical values for gold, silver, copper, lead, and zinc, the size and number of veins, the alteration, and the rock type indicate this system should be studied in detail. In addition, the alteration, the proximity to felsic intrusive dikes and plugs, and anomalous analytical values of molybdenum describe an environment similar to the high-potassium, calc-alkaline molybdenum deposits of the stock, plutonic, or Climax type (Westra and Keith, 1981, p 852).
486	Hoot Owl prospect	0060711738 T11N R14E sec.09	A north-striking, vertical-dipping, gray to white quartz vein up to 2 ft thick (averages 1.2 ft) is exposed for 85 ft in a fault gouge as much as 5 ft thick. Country rock is a medium-grained granitic gneiss. No visible metallic minerals except minor disseminated pyrite. The vein is terminated on the north end by east-trending, north-dipping faults.	A 115-ft-long adit includes a 10-ft raise and a 16-ft-winze. Part of the adit was recently excavated to an open cut.	The vein contains an occurrence of about 500 tons at an average (weighted) value of 0.32 oz/ton gold. One grab sample and four chip samples taken. Three samples of the vein contained from 0.068 to 0.224 oz/ton gold and one contained 2.12 oz/ton gold. No gold was detected in the crosscutting faults. Based on the high gold values, the strength of structure, and the presence of other gold deposits in the vicinity, this zone should be studied in detail to determine if resources are present.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
487	Prospect	0060711743 T11N R14E sec.10	Localized, variably oriented, narrow quartz veins, 1-2 in. thick are in Precambrian gneiss. Veins are vuggy and iron-oxide stained. One vertical vein strikes N. 80° E.; one strikes N. 60° W., dips 54° SW.; and one strikes N. 20° E., dips 27° SE.	One 25-ft adit and two small pits. Workings are spatially related but apparently not structurally related.	Of three chip samples, one contained 0.077 oz/ton gold and two contained 0.3 oz/ton silver. One high gold value and the geologic environment indicate that the vein system merits further study.
488	Prospect	0060711744 T11N R14E sec.10	A northwest-trending, steeply north-dipping fault zone is up to 5 ft thick, exposed for 115 ft, and has a 2- to 10-in. calcite vein in clay gouge; contains abundant pyrite in pods with spotty galena. A crosscut intersects three quartz-calcite veins and a 50-ft-wide zone of brecciated gneiss rock with disseminated pyrite. Two, localized, north-trending, steeply east dipping quartz veins and an east-trending, north-dipping shear zone are exposed on the surface. Veins and shear zones are in friable to punky, iron-oxide stained, banded granite gneiss.	One tunnel with one portal caved includes 115 ft of drift and 135 ft of crosscut; one open cut, 10 ft diameter.	Of 11 chip samples underground, 8 contained detectable gold ranging from 0.006 to 0.138 oz/ton, 8 contained detectable silver ranging from 0.4 to 12.3 oz/ton, 3 contained 0.1% copper, 7 contained 0.02% to 0.61% lead, and 8 contained 0.01% to 0.65% zinc. Six samples taken on the 115-ft calcite vein averaged 0.04 oz/ton gold and 4.7 oz/ton silver. No gold or silver were detected in three samples from veins and shear zones at the surface. The exposed deposit is too small for a resource calculation; however, the sporadic, moderately high assay values indicate the property merits additional study for gold and silver resources in veins.
489	Triple 10 Nos. 1-3 prospect	0060711740 T11N R14E sec.10	Massive to brecciated quartz veins 1 to 14 in. thick occur in sheared gneiss exhibiting chlorite and sericite alteration. One vein system strikes N. 55°-60° E., dips 50°-65° SE., crops out discontinuously for 500 ft and contains pyrite, limonite after pyrite, and abundant galena. A collapsed working 800 ft (along strike) from the southwestern outcrop may be on the same vein. An east-striking, 75° N. dipping shear zone is also developed.	One 20-ft adit, one caved adit or shaft and two inclined shafts, 130 and 25 ft deep.	Three chip and two select samples were taken. Of four samples taken on the quartz vein, two select samples contained 0.01 and 0.366 oz/ton gold, 2.5 and 8.4 oz/ton silver, 0.09% and 0.14% copper, 4.5% and 7.6% lead, and 0.28% and 0.88% zinc, two chip samples contained 0.006 and 0.032 oz/ton gold, 0.18% and 0.91% lead with one of the chips containing 0.9 oz/ton silver. The chip samples on the shear zone contained no detectable values. Sporadic moderate to high assay values of gold, silver, and lead indicate that the property merits further investigation.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
490	Prospect	0060711739 T11N R14E sec.10	A N. 60° E. striking, nearly vertical structure in granite gneiss bears comb quartz up to 6 in. thick with calcite filling. Disseminated pyrite occurs in quartz and in gouge.	One partially caved shaft and one trench.	Two grab samples contained 0.004 and 0.03 oz/ton gold, 0.274 and 3.1 oz/ton silver, 0.0022% and 0.0097% copper, and 0.021% to 0.16% zinc. One contained 0.016% lead and 0.0025% molybdenum. Gold and silver sample analyses indicate further study is warranted.
491	Blue Jay No. 1 prospect	0060711741 T11N R14E sec.10	East-trending shear zones in granite gneiss contain calcite veins with pyrite-filled fractures, massive gray to white quartz, and quartz breccia with silica cement; probable argentite at one isolated outcrop.	Two adits, 145 and 37 ft long, two flooded shafts, one 40 ft to water line, one 8 ft to water line, two pits, and a cabin.	Of 15 chip, grab, and select samples, 2 contained detectable gold at 0.01 oz/ton. Silver was detected in 11 samples, 9 contained 0.02 to 0.31 oz/ton and 1 select sample contained 21.1 oz/ton silver, 0.009% copper, 0.44% lead, and 0.03% zinc. Although sample analyses are generally low, the presence of detectable gold, one very significant silver value, and significant deposits of a similar nature to the northwest indicate the property merits additional investigation.
492	Decorative stone quarry	0060711836 T11N R14E sec.11	Relatively flat-lying, punky to silicified, buff-to-gray, interbedded tuffs and rhyolitic lava flows underlie the property. Desired stone is apparently silicified tuff which splits into slabs 2 to 5 in. thick and about 12 in. in diameter.	One small quarry site and a network of exploration jeep trails. Possible production of less than 20 tons of decorative stone based on the size of the quarry.	No samples taken. Large tonnage available of stone marginally suitable as wall facade decorative stone. The deposit is classed as subeconomic except for local use due to the cost to ship to distant markets.
493	Doodle Bug-Wildcat-Wild Horse placer	0060713056 T11N R14E sec. 12	Fluvial sediments from washes in and entering Wild Horse Canyon are composed predominantly of gneissic, granitic, and volcanic silt, sand, and gravel (<1 in. in diameter) with 1%-2% black sands. Claims were located about 1960 in secs. 2 and 11, T11N, R14E and in sec. 18, T11N, R15E, S.B.M.	None.	No gold was observed in two 0.38 ft reconnaissance samples. One sample contained a trace garnet and a trace of native copper.
494	Prospect	0060711747 T11N R14E sec.10	An east-striking, 40°-50° N. dipping quartz-bearing shear zone and a quartz vein occur in a fault gouge zone 4.5 ft thick, striking N. 80° W. and dipping 55° SW.; both are in altered, Precambrian gneiss.	Two shallow pits.	One select grab on the quartz-bearing shear contained 0.074 oz/ton gold and 0.8 oz/ton silver. One chip sample from the quartz vein contained 0.01 oz/ton gold and 0.01% lead and zinc. No copper detected. Based on gold and silver assay values and similar deposits in area, the property merits additional

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
495	Prospect	0060711746 T11N R14E sec.09	A massive, 5- to 8-in.-thick, iron-oxide stained quartz vein strikes N. 30°-20° E. and dips 40°-80° NW. in silicified gneiss. Two outcrops of the vein are 140 ft apart. The vein is apparently terminated at both ends by east-trending, north-dipping shear zones.	One 30-ft-long open cut, one 10-ft adit with a 30-ft-long open cut and one adit, 40 ft long.	investigation. Two quartz vein chip samples contained 0.192 and 0.078 oz/ton gold and one contained 0.1 oz/ton silver. One random chip on a 20-ft-wide shear zone contained 0.010 oz/ton gold and 0.2 oz/ton silver. Sample analyses and a nearby past producer suggest the prospect merits further investigation for gold resources at depth.
496	Prospect	0060711751 T11N R14E sec.09	Generally northwest-trending, northeast-dipping, white to translucent gray, iron-oxide stained, 1 to 6 ft thick quartz veins are associated with shear zones in gneiss. Quartz is massive to brecciated with a few voids formed by dissolved pyrite.	Two short adits, one 20-ft-deep inclined shaft and three pits.	Four of nine chip samples contained measurable gold, from 0.002 to 0.085 oz/ton. Eight of nine samples contained measurable silver, from 0.05 to 2.7 oz/ton. Only one of the silver assays was above 1 oz/ton. Low levels of copper (<0.03%), lead (<0.17%) and zinc (<0.05%) were detected in some samples. Molybdenum ranged from 0.003% to 0.0075% in five samples. Sample analyses and nearby gold and silver deposits indicate that the property merits additional study.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
497	Globe mine	0060710103 T11N R14E sec.09	Roughly tabular, pinch and swell quartz veins and a zone of sheared and brecciated gneiss and quartz trend east and dip 30°-60° N. The zone is exposed for 240 ft along strike, 275 ft downdip and is about 5.0 ft thick. Nearby outcrops suggest a possible strike length of 1,500 ft. Quartz is white to dark blue-gray and contains pyrite, limonite after pyrite, galena, chalcopryite, specularite, and probable sphalerite. Chlorite and epidote are common alteration minerals and hexahydrite encrustations have weathered out on the ribs in shear zones. Felsic volcanic rock exhibiting sericitic and chloritic alteration contains disseminated pyrite in two locations in the haulageway.	A 275-ft-long inclined shaft with 400 ft of drifts and 100 ft of stopes is connected by a 700-ft haulageway to a partially collapsed adit and shaft; three inclined shafts, a caved shaft, a 30-ft adit, and five pits. Tucker and Sampson (1930, 1931) reported very high-grade ore shipments.	Indicated subeconomic resources of 30,000 tons and inferred subeconomic resources of 80,000 tons at an average grade of 0.05 oz/ton gold and 1.0 oz/ton silver. Seventy chip, 3 random chip, and 2 select samples were taken. Fifty-one contained detectable gold, values ranged from a trace to 1.05 oz/ton; 12 contained >0.1 oz/ton gold. Fifty contained detectable silver, values ranged from 0.053 to 65.9 oz/ton; 16 exceeded 1.0 oz/ton silver. Thirty-eight contained 0.0008% to 0.0100% copper, 42 contained 0.0014% to 0.34% lead, 74 contained 0.0035% to 0.13% zinc, and 59 of 62 samples analyzed contained 0.0018% to 0.0330% molybdenum. Of 21 analyzed for tin and tungsten, 20 contained 0.02% to 0.04% tin and 9 contained 0.0006% to 0.0014% tungsten. Geologic setting, metal values, and similar deposits in the vicinity suggest additional gold, silver, and possible molybdenum resources may be present at depth.
498	Prospect	0060711745 T11N R14E sec.09	An iron-oxide-stained quartz vein, 0.3 to 0.5 ft thick, strikes N. 25° E. and dips 20° SE. in silicified granite gneiss.	One adit, 10 ft long.	One chip sample contained 0.0015 oz/ton gold, 0.296 oz/ton silver, 0.12% lead, 0.0034% molybdenum, and 0.042% bismuth. Significant nearby properties and the sample value suggest the prospect merits additional investigation.
499	Prospect	0060711749 T11N R14E sec.09	Small quartz lenses occur in iron-oxide stained, fractured banded gneiss.	One pit.	One grab sample contained 0.006 oz/ton gold, 0.14 oz/ton silver, 0.0031% zinc, and 0.0021% molybdenum. The presence of anomalous gold and nearby past producers indicate that additional studies are warranted.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
500	Prospect	0060711748 T11N R14E sec.09	A north-northwest trending, steeply northeast-dipping, pinch and swell quartz vein up to 12 ft thick is poorly exposed in granite gneiss country rock which is silicified and sericitically altered. Some pyrite and considerable manganese oxides observed. Some secondary copper minerals are on fractures.	One adit, 15 ft long, one caved shaft, and one trench.	Four of five chip and grab samples contained detectable gold and all contained detectable silver; gold assays ranged from 0.002 to 0.01 oz/ton and silver assays ranged from 0.09 to 3.4 oz/ton. One sample contained 1.3% copper with the rest ranging from 0.0012% to 0.04%; minor lead and zinc were also detected. Two samples contained 0.0011% and 0.0056% molybdenum. Sample analyses for gold and silver, prominence of vein, and similar nearby deposits indicate the property merits additional investigation for small, high-grade, vein-type gold and silver resources.
501	Prospect	0060711665 T11N R14E sec.09	Localized, 1- to 6-ft-thick northeast- to northwest-trending, easterly dipping, iron-oxide-stained, sulfide-bearing quartz veins in fractured gneiss show sericitic and chloritic alteration. Quartz is white, massive to brecciated, and contains pyrite, limonite after pyrite, galena, and possibly chalcopyrite.	Three adits, 22 ft, 25 ft, and 128 ft long.	Of six chip and two grab samples, four contained from a trace to 0.08 oz/ton gold, six contained from 0.006 to 1.13 oz/ton silver, and from 0.0018% to 0.02% copper, and five contained from 0.0089% to 0.97% lead. Three samples analyzed for zinc contained 0.0029% to 0.033% and, of two samples analyzed for molybdenum, one contained 0.024%. Sample analyses and the size of the vein system indicate that further studies may reveal vein-type gold, silver, and possibly lead resources at depth.
502	Frisco No. 1 prospect	0060711656 T11N R14E sec.09	Relatively unaltered to intensely altered, sulfide-bearing schist with no major structure observed. Altered schist contains magnetite, calcite, sericite, pyrite, and fine grained chalcopyrite. A 35-ft-thick rhyolite porphyry dike and sulfide ore, which contains 0.15 and 0.73 oz/ton gold, respectively, are reported (Tucker and Sampson, 1930, p. 235).	One caved adit was (Tucker and Sampson, 1930, p. 235) about 400 ft long with a 50-ft raise to the surface and a 30-ft winze.	Two grab samples from the approximately 1,000 yd <sup>3</sup> dump contained nil and 0.0006 oz/ton gold, 0.012 and 0.029 oz/ton silver, 0.015% and 0.040% copper, and 0.0037% and 0.0081% molybdenum. One contained 0.0049% zinc. Analytical results were low, however, the presence of other gold deposits in the vicinity, and reported grades, indicate that the property merits additional investigation.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
503	SS No. 7 prospect	0060711742 T11N R14E sec.09	A gray-to-white, iron-oxide-stained, 1- to 3-ft-thick quartz vein which strikes N. 20° E., dips steeply southeast, and crops out for 50ft.	None	One random chip contained 0.0017 oz/ton gold, 0.15 oz/ton silver, 0.0720% lead, and 0.0020% molybdenum. Gold sample analysis and similar significant deposits in the vicinity indicate that further studies are warranted.
504	Prospect	0060711655 T11N R14E sec.09	A shaft was driven N. 50° E. to intersect a quartz vein which crops out to the east and 10 ft higher in elevation. The vein is 6 ft thick, strikes N. 50° W. and dips 78° NE. in a quartz-mica schist with quartz veinlets.	One 25-ft-deep inclined shaft.	One chip sample across the outcrop contained 0.01 oz/ton silver; no gold detected.
505	Prospect	0060711657 T11N R14E sec.07	Lenses and stringers of specular hematite occur in pinkish, medium-grained, quartz-rich intrusive rock, probably quartz monzonite. A pit in weathered gneiss is located S. 80° E., 100 ft from the center of a bulldozer cut. Stringers of hematite up to 1 in. thick can be traced 400 ft south from the bulldozer cut and 100 ft to the north. The maximum thickness of lenses exposed in a cut is 2 ft. The ore mineral is massive, specular hematite with a minor amount of pyrite.	One 50-ft-long bulldozer cut and one pit.	A grab sample from a 4 ton stockpile contained 41.5% iron and 0.05 oz/ton silver.
506	Prospect	0060711651 T11N R14E sec.07	A contact of quartz monzonite and gneiss is exposed for 10 ft. The contact strikes N. 80° E. and dips 40° S. A fractured and silicified zone 6 ft thick occurs in the quartz monzonite at the adit portal. The zone contains minor pyrite and copper carbonate.	One 10-ft adit.	A 3-ft chip sample contained 0.01 oz/ton gold and 0.17 oz/ton silver. The gold value indicates that the prospect should be investigated in more detail.
507	Prospect	0060711650 T11N R13E sec.12	An altered zone in quartz monzonite is exposed in two pits 50 ft apart. The zone of alteration is 8 ft thick as exposed in the face of one pit. A portion of the zone about 3 ft thick is leached and bleached to a punky white clay and contains quartz ribs 2 in. to 4 in. thick.	Two pits.	A sample from the 3-ft section contained trace gold and 0.06 oz/ton silver. Additional investigation is merited.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
508	Prospect	0060711649 T11N R13E sec.12	Three segments (52 ft, 72 ft, and 180 ft) of a northwest-trending, variably dipping 6- to 10-ft-thick, white quartz vein crop out for a strike length of 440 ft in granitic rock.	One pit.	One grab sample contained 99.15% SiO <sub>2</sub> , 0.30% iron, and 0.05% Al <sub>2</sub> O <sub>3</sub> . No gold or silver was detected. Inferred size of the occurrence is 9,900 tons. Silica grade meets specifications for some industrial applications, however, small deposit size and great distance to market suggest little, if any, economic significance for the foreseeable future.
509	Okaw mine	0060711759 T11N R13E sec.11	Country rock is quartz monzonite intruded by rhyolitic dikes. Both the monzonite and the dikes exhibit sericitic alteration. Northeast-striking quartz veins, 0.6 to 3.7 ft thick, dip steeply to the south and contain galena, limonite after pyrite, and minor amounts of chalcopryrite, sphalerite, and secondary copper minerals. Veins and shears are exposed for at least 400 ft.	Five shafts, all inaccessible, 3 adits, 24,30, and 105 ft long, and 8 pits. Building foundations appear to be from a mill. No known production.	Of 16 chip, 3 select, and 2 grab samples, 17 contained measurable gold and silver. Eleven samples had gold values between 0.01 and 0.29 oz/ton and 7 samples had silver values between 1.0 and 6.1 oz/ton. All samples contained detectable lead; 8 contained from 1.2% to 7.8%. Copper values ranged from 0.0009% to 0.83% and molybdenum values ranged from 0.0018% to 0.027% in 15 samples analyzed. The number and sizes of veins and the high analytical values for gold, silver, lead, and copper indicate further exploration is warranted.
510	Prospect	0060711760 T11N R13E sec.13	Shaft symbol on provisional (1983) U.S. Geological Survey Hayden 7.5' quadrangle. Granitic terrain; may be an extension of the Prospect (no. 78). Prospect not found during field studies.	One shaft (?).	Property not examined.
511	Del No. 2 prospect, north extension	0060711658 T11N R14E sec.07	A fractured, iron-oxide stained, 5-ft-thick zone strikes N. 85° W. and dips 45° NE. along an irregular contact zone between gneiss and granitic rock.	Open cut, 10 ft deep.	One chip sample contained no detectable gold or silver.
512	Prospect	0060711659 T11N R14E sec.07	An iron-oxide-stained 25-ft-thick contact zone is between gneiss and a rhyolite dike.	One 3-ft adit and a 32-ft trench.	One chip sample contained 0.009 oz/ton silver.
513	Del No. 2 prospect	0060711660 T11N R14E sec.18	A 600-ft-long, relatively flat-lying, weak skarn zone occurs along a contact between a fine-grained gray rock (limestone?) and granitic rocks.	One 62-ft adit, three shallow shafts, and four pits.	One chip and one select sample contained 0.009 and 0.006 oz/ton silver. No gold was detected.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
514	Prospect	0060711664 T11N R14E sec.08	A 2-ft-thick, N. 80° W. striking, vertical, silicified, iron-oxide-stained zone occurs along a dike in foliated schist.	One pit.	One chip sample contained 0.3 oz/ton silver; no gold detected.
515	Firefly-White Eagle-Star placer prospect	0060713057 T11N R14E sec.17	Fluvial sediments from Summit Wash are composed of poorly sorted, gneissic sands, gravels, and cobbles. Wash is narrow and moderately scoured at upper elevations and rapidly widens and thickens at confluence with Globe Wash. Claims located 1913-1938.	None.	Of three 0.38 ft <sup>3</sup> reconnaissance pan samples, one contained 10 bright, subrounded-to-subangular pitted, chunky fragments of gold, for a total of 0.110 mg, and traces of garnet and hematite. Value is estimated at \$0.10/yard at a gold price of \$400/oz. Two samples contained traces of scheelite.
516	SS No. 49 prospect	0060711670 T11N R14E sec.08	A 5-ft-thick, vuggy, iron-oxide stained, pyrite-bearing quartz zone trends N. 40° W. in green-to-white, fine-grained intrusive rock.	Open cut 8 ft long.	One chip sample contained 0.0014% molybdenum and 0.0018% tungsten; no gold or silver was detected.
517	Clamento No. 3 prospect	0060711750 T11N R14E sec.16	West-northwest-striking, variably dipping white to gray quartz veins in argillically to sericitically altered, punky to silicified gneiss along a northern projection of the East Providence fault zone. The quartz is 1 ft thick, iron-oxide-stained, and in some places contains secondary copper minerals.	One inclined shaft, 30 ft deep, one adit 7 ft long, and three pits.	Three chip and three grab samples taken. All samples contained detectable gold and silver; silver ranged from 0.012 to 0.872 oz/ton and gold ranged from 0.0006 to 0.085 oz/ton. Two gold assays were >0.01 oz/ton; at 0.085 and 0.077 oz/ton. One sample contained 1.9% lead and one contained 1.9% copper. Other sample values ranged from nil to 0.031% copper, nil to 0.058% lead, and 0.0030% to 0.079% zinc. Four samples contained from 0.0008% to 0.0048% molybdenum. Consistent gold values and nearby past producers suggest that additional exploration for gold and silver resources with byproduct copper and lead resources is warranted.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
518	Prospect	0060711753 T11N R14E sec.16	A west-northwest-trending, northeast-dipping, fault zone contains gray to white, massive to brecciated quartz veins and iron-oxide stained fault gouge and breccia. Country rock is silicified Precambrian gneiss. The main structure is 2 to 5 ft thick and crops out for about 80 ft.	Two shafts, 16 and 17 ft, and one adit, 8 ft long.	Of four chip samples, two had 0.006 and 0.038 oz/ton gold and 0.4 oz/ton silver. Three contained 0.01% to 0.2% lead, and four contained 0.01% to 0.04% zinc; no copper detected. Higher values occur in the central part of the outcrop. Sample analyses, size of the vein, and nearby deposits indicate that the property merits further study for gold and possibly silver resources at depth.
519	Santa Anita-Beecher Canyon placer prospect	0060713058 T11N R14E sec.15	Fluvial sediments from the head and mouth of Beecher Canyon are composed predominantly of gneissic sand and pebbles with slight to moderate quantities of volcanic rock. Two samples had notable comb quartz fragments. One claim was located in 1916 at the mouth of the canyon, and two claims were located in 1961 at head of the canyon.	None.	Of four 0.38 ft <sup>3</sup> reconnaissance pan samples of typical sediments and one select 0.38 ft <sup>3</sup> pan sample of surficial concentrations of black sands, three samples contained gold. Two of the reconnaissance samples at the head of the canyon contained 0.022 and 0.023 mg of bright, subrounded gold with traces of pyrite, scheelite, and zircon. The select sample at the mouth of the canyon contained 0.169 mg of bright, subangular to subrounded gold with a trace of garnet. Value of the three samples is estimated to range from \$0.02 to \$0.15/yard <sup>3</sup> at a gold price of \$400/oz.
520	Prospect	0060711754 T11N R14E sec.16	A 2-ft-thick shear zone strikes N. 22° E., dips 65° SE., contains quartz veins, and occurs in Precambrian granite gneiss. The zone is highly fractured with iron-oxide filling and purple-brown alteration products in the fractures and joints.	One pit.	One chip sample had 1.29 oz/ton gold, 6.9 oz/ton silver, 0.17% lead, and 0.03% zinc. The high gold and silver assay value indicates that further study is warranted.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
521	Double H Nos. 1 and 2 mine	0060710102 T11N R14E sec.10	A quartz vein and a silicified, altered shear zone strike N. 50°-60° W., dip 45°-75° NE., and crop out for about 1,000 ft in gneissic rock. The vein averages 1.4 ft thick, is white to gray and contains pyrite, galena, and sphalerite.	Two pits, a 50-ft-long open cut, two adits (45 ft and 90 ft long), one caved adit, and one inclined shaft at least 40 ft deep. Production from 105 tons of ore was 42 oz gold and 329 lb copper in 1931 (USBM statistical files).	An inferred, subeconomic resource of 45,000 tons at an average grade of 0.02 oz/ton gold and 2.5 oz/ton silver with byproduct lead and zinc. The past production, the size of the deposit and the sample analyses suggest further investigation may reveal additional vein-type gold and silver with byproduct copper, lead, and zinc resources at depth. Eight chip and three select samples; nine contained gold which ranged from 0.006 to 0.268 oz/ton and averaged 0.063 oz/ton; silver ranged from 0.5 to 44.4 oz/ton and averaged 8.2 oz/ton, only four exceeded 5 oz/ton silver. Lead and zinc ranged from 0.01% to 1.2% and 0.02% to 0.3% and averaged 0.2% and 0.07%, respectively. The past production, the size of the deposit, and the sample values suggest that further investigation may reveal additional vein-type gold and silver resources with byproduct copper, lead, and zinc.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
522	Frisco No. 3 mine	0060711752 T11N R14E sec.16	Two quartz veins have the following strikes and dips: the Horn Silver, N. 10°-30° W., 25°-42° NE., and the Silver Bell, N. 50°-70° W., 45°-75° NE. The veins are in locally intensely altered, silicified gneiss. Quartz is white to gray, iron-oxide stained and massive to brecciated with rare comb structures. Altered rock is composed of quartz, potassium feldspar, sericite, jarosite, and iron oxides. The Horn Silver vein is exposed for 55 ft and is up to 20 ft thick. The Silver Bell vein is exposed for 500 ft and is 1- to 5.5-ft thick.	Five adits (5, 15, 35, 84, and 235 ft long), two shallow inclined shafts, a caved inclined shaft, two pits, and several open cuts. Production from 1 ton of ore was 2.11 oz gold and 54 oz silver in 1930 (USBM statistical files).	The Silver Bell vein contains an indicated subeconomic resource of 2,000 tons at 0.006 oz/ton gold and 0.2 oz/ton silver and an inferred subeconomic resource of 38,000 tons averaging 0.022 oz/ton gold and 0.7 oz/ton silver. One grab, 4 random chip, and 25 chip samples taken. Fifteen of 20 samples on the Silver Bell vein contained 0.001 to 0.07 oz/ton gold and 0.04 to 6.0 oz/ton silver. Seven of 9 samples on the Hornsilver vein contained 0.020 to 0.196 oz/ton gold and 0.3 to 11.8 oz/ton silver. Generally low levels (<0.01%) of copper, lead, zinc, and molybdenum were detected in samples from the two vein systems although lead ranged from 0.12% to 0.28% in eight samples and one contained 1.2%. Size, grade, and alteration indicate this property merits further investigation for additional gold and silver resources with possible byproduct lead.
523	Prospect	0060711667 T11N R14E sec.16	Minor amounts of iron-oxide stained, vuggy quartz occur in 4- to 12-ft-thick, variably oriented, bleached, silicified gouge and shear zones in altered gneiss. The main structure strikes N. 15°-20° W. with a near vertical dip.	Two adits, 8 and 15 ft long, one 20-ft trench and one pit.	Of five chip samples, three contained from 0.001 to 0.05 oz/ton gold. Silver values ranged from 0.04 to 0.9 oz/ton. Gold and silver sample analyses indicate that additional study is needed.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
524	Orro Platta prospect	0060711755 T11N R14E sec.16	Quartz veining 1 to 4 ft thick occurs along predominantly northwest-trending, northeast-dipping fault zones. Country rock is Precambrian gneiss with argillic (?) alteration and scattered iron-oxide staining. The quartz vein is exposed in workings for 450 ft along its northwest trend, but continuity of the structure is uncertain between workings.	One shaft, 18 ft deep, three adits, two 10 ft long and one 50 ft long, and one pit.	Of seven chip samples from quartz veins and gouge, six had no gold and one had 0.186 oz/ton gold and 11.7 oz/ton silver. Three samples had 0.2 to 0.5 oz/ton silver and one had 1.1 oz/ton silver. One sample contained 0.05% copper, six contained 0.01% to 0.08% lead, one contained 0.52% lead, and zinc values ranged from 0.01% to 0.08%. Sporadic but significant sample values, and past producers in the vicinity, indicate that the vein system should be studied in detail to determine whether or not gold, silver, and possibly lead resources are present.
525	SS Nos. 51, 52, 60 and 61 prospect	0060711666 T11N R14E sec.17	A discontinuous, northeast-trending, vertical-to northwest-dipping, white, 1- to 5-ft-thick quartz vein, and a pegmatite dike occur in gneiss. Quartz and the enclosing shear zone contain pyrite, limonite after pyrite, galena, and calcite. The system is exposed for about 120 ft.	One flooded shaft, two adits, 140 ft and 65 ft long, and six pits.	Eleven chip samples contained 0.01% to 0.03% copper and 0.01% to 2.8% lead; only one sample exceeded 0.5% lead. No gold or silver were detected. Extent of workings and the high lead assay value indicate that further study is needed.
526	SS Nos. 63, 64 prospect	0060711668 T11N R14E sec.18	Workings are on two sets of structures in Precambrian gneiss and Paleozoic limestone with local exposures of granitic rock. One set strikes N. 50°-65° E. with dips ranging from 50° NW. to 45° SE. and the other set strikes N. 20°-30° W. and dips 45°-50° NE. Structures range from 0.5 to 9.0 ft thick.	Three adits, 5 ft, 32 ft, and one caved; four inclined shafts 11 ft, 25 ft, at least 50 ft, and 50 ft with 50 ft of drift.	Of nine chip samples, four contained 0.2 to 0.5 oz/ton silver; none contained gold. Extent of workings, nearby deposits, and sample analyses indicate that the property merits additional investigation; silver resources may be associated with shear zones in carbonate rocks.
527	Providence mine	0060710269 T11N R14E sec.10	Two north-northeast trending faults bound a 30-ft-thick zone of silver-bearing, limestone breccia, near a contact with gneiss. The East Providence fault gouge averages 5.5 ft thick and contains gold. The deposit is exposed for 80 to 130 ft but the fault contact and limestone breccia continues at least 3 mi south.	A 224-ft adit, two adits, and two shafts, one collapsed at collar. Leech (1890, p 105) reported 4.1 oz gold produced in 1889 and USBM statistical files report 12 tons containing 445 oz silver, 166 lb copper, and 2,465 lb lead produced in 1918.	Of 15 chip and 2 random chip samples, 3 contained 0.01 to 0.11 oz/ton gold and 4 contained 0.3 to 1.0 oz/ton silver. Four samples contained 0.01% to 0.06% lead. Past production, the similarity of the deposit to the Silver King mine (no. 149), and the sample analyses indicate that the property merits further investigation for additional silver, gold, lead, and copper resources at depth or laterally along the



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
					brecciated limestone.
528	Prospect	0060711662 T11N R14E sec.18	A thin, irregular, altered contact zone occurs between weathered gneiss and a light colored, quartz-rich intrusive rock. The 1.5-ft-thick, iron-oxide stained contact zone trends N. 45° E., dips vertical and is altered to clay.	Two pits.	One chip sample contained no detectable gold or silver.
529	Prospect	0060711663 T11N R14E sec.18	Light gray-to-tan, fine-grained, silicified rock, probably rhyolite, is iron-oxide stained, contains up to 5% fine, crystalline pyrite, and knife-edge to 1/4-in.-thick veinlets and blebs of specular hematite. A nearby pit is in brecciated, silicified limestone cemented with massive white calcite. The breccia contains irregular stringers of hematite.	One 24-ft-deep inaccessible shaft, and one pit.	A grab sample of rhyolite contained 0.006 oz/ton gold and 0.006 oz/ton silver. A grab sample of limestone contained 0.55 oz/ton gold and 0.06 oz/ton silver. Although the geologic environment is not well understood at this prospect, the gold sample analyses suggest that the prospect merits additional investigation.
530	Prospect	0060711661 T11N R14E sec.18	Pits are in a N. 30° W. striking, 64° NE. dipping, fracture zone in a light gray, fine-grained rhyolitic rock. Zone is observed for 25 ft along strike and is 3.5 ft thick.	Two shallow pits.	One chip sample contained 0.007 oz/ton gold. Sample analysis indicates the prospect warrants further study.
531	Del No. 2 prospect, south extension	0060711719 T11N R14E sec.18	A 2-ft-thick breccia zone strikes N. 30° E. and dips 80° NW. along a contact zone between gneiss and granitic rock. The zone contains 1/4- to 1/2-in.-thick quartz veinlets, minor secondary copper minerals, and some garnet and epidote.	One pit.	One chip sample contained 0.01 oz/ton silver; no gold detected.
532	Silver Queen I- XXXIII prospect	0060711761 T11N R13E sec.13	Several quartz veins generally trend northeast, dip steeply southeast, and crop out in granitic country rock. The veins are 0.5 to 1.0 ft thick and contain galena, pyrite, and chalcopryite. Minor amounts of secondary copper minerals and iron oxides are also present. The veins pinch and swell and can be traced up to 200 ft. One vein, exposed in a pit, is cut off by a fault or shear zone just below the surface.	Three shallow shafts, three trenches, and one pit.	A total of five samples were taken, four of which were from quartz veins. Two of the four quartz vein samples contained 0.19 and 0.37 oz/ton gold, 2.2 and 4.7 oz/ton silver, and 4.2% and 1.8% lead. The exposed veins are too narrow and discontinuous to make a resource estimate, but the high values of gold, silver, and lead warrant further exploration.
533	Prospect	0060711762 T11N R13E sec.23	Three- to 7-ft-thick silicified and altered zones trend north, dip steeply east, and crop out discontinuously for about 400 ft in gneiss and quartz monzonite. Numerous quartz veinlets merge into massive gray quartz with minor amounts of specular	One 38-ft adit and three pits.	Four samples contained no gold or silver and only minor amounts of copper, lead, and zinc.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
			hematite.		
534	First Chance placer prospect	0060713059 T11N R13E sec.15	Fluvial sediments consist of 90% pea gravel and coarse sands and 10% silt and clay; composition is predominantly granitic and contained 1%-3% black sands. The First Chance claims were located in secs. 9, 16, and 23, T11N, R13E, S.B.M., in 1954 and 1957.	None.	One 0.38 ft <sup>3</sup> reconnaissance pan sample contained two particles of bright, subangular to angular gold for a total of 0.001 mg. The material is valued at less than \$0.01/yd <sup>3</sup> at a gold value of \$400/oz.
535	Jo Je mine	0060710133 T11N R13E sec.23	Two subparallel quartz veins 500 ft apart trend west-northwest and dip south in granitic rock. The veins are 1 to 3 ft thick, crop out for 700 to 900 ft, and contain white to gray, massive to brecciated, iron-oxide stained quartz with limonite after pyrite and rare galena. An andesite dike lies adjacent to the south vein. Northwest-trending, northeast-dipping normal faults cut the north vein.	Workings consist of six shafts, 15 to 90 ft deep, two trenches and nine pits. The main shaft may have 300 ft of drifts on two levels. USBM statistical files indicate 185 tons of crude ore contained 72 oz gold and 392 oz silver (grades averaged 0.39 oz/ton gold and 2.1 oz/ton silver) from a small cyanide mill.	Of 1 select and 15 chip samples, 8 contained gold ranging from 0.012 to 0.163 oz/ton and averaging 0.052 oz/ton, and 6 contained silver ranging from 0.3 to 2.1 oz/ton and averaging 0.9 oz/ton. Copper values ranged from 0.0091% to 0.06%, lead values ranged from 0.03% to 0.53%, and zinc values ranged from 0.0013% to 0.01%. Production history and sporadic but significant gold and silver values indicate this property may have additional high-grade, vein-type resources at depth.
536	Prospect	0060711764 T11N R13E sec.24	A 0.5-ft-thick quartz vein with stringers of remnant sulfides strikes N. 30° E. and dips 32° SE. in granitic country rock. Chloritic alteration occurs along the contacts and stringers of hematite occur within the country rock.	One pit.	One chip sample contained 0.01 oz/ton gold, 0.0020% copper, 0.0400% lead, and 0.0044% molybdenum. Alteration and sample analysis indicate that the prospect merits additional investigation for gold resources.
537	Prospect	0060711768 T11N R13E sec.25	Granite gneiss contains specular hematite which occurs along fractures striking N. 15° W. and dipping 85° NE.	One pit.	One select sample: no gold or silver detected.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
538	Green Scorpion prospect	0060711765 T11N R14E sec.19	A fault zone trends northeast and dips northwest in meta-igneous rock and contains a quartz vein, quartz breccia, and soft gouge. The vein contains relict sulfides, secondary copper minerals, and iron- and manganese-oxide staining. Extensively silicified, carbonatized, and sericitized porphyritic dikes of andesite to rhyodacite composition are exposed in the workings and cut by the mineralized fault. The fault zone is exposed discontinuously for 185 ft along strike and averages 2.3 ft thick.	One 55-ft-long adit and one pit.	The deposit contains 3,300 tons with a weighted average grade of 0.086 oz/ton gold. Four chip and one select sample were taken. Gold assay values ranged from 0.0005 to 0.16 oz/ton, and averaged 0.1 oz/ton, and silver assay values ranged from 0.04 to 0.3 oz/ton. Copper content ranged from 0.012% to 0.17%, two samples contained 0.0047% and 0.0062% molybdenum, and one sample contained 0.0039% zinc. Several high gold assay values indicate the property merits additional investigation.
539	Greek prospect	0060711766 T11N R14E sec.19	Two intersecting shears in porphyritic rhyolite exhibiting sericitic alteration. Gouge along structures is iron-oxide stained and 2 in. thick.	Two pits.	One sample contained 0.5 oz/ton silver and 0.0054% molybdenum; no copper, lead, or zinc detected. Silver sample analysis and the nature of nearby deposits indicate further study is warranted.
540	Morning Star prospect	0060711763 T11N R14E sec.19	A quartz vein 3 in. thick occurs in granitic rock and contains pyrite and limonite pseudomorphs after pyrite.	One adit (caved).	One grab sample contained 0.0009 oz/ton gold and 0.02 oz/ton silver, 0.0046% zinc and 0.0056% molybdenum; no copper or lead detected. Presence of gold suggests further exploration is warranted.
541	Independence prospect	0060711766 T11N R14E sec.19	Coarse-grained granite gneiss is brecciated locally, with sericitic and kaolinitic alteration and some iron-oxide staining.	One bulldozer cut and one pit.	One sample contained 0.0170% zinc and 0.0048% molybdenum; no gold, silver, copper, or lead detected.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
542	Fan 1-5 prospect	0060711767 T11N R14E sec.19	Granitic intrusive rock and granite gneiss is intruded by dikes of andesitic to dacitic composition. Several fault or shear zones containing quartz veins, breccias, and gouge trend northwest and northeast and dip northerly. Minor occurrences of secondary copper minerals and primary sulfides are within the 1- to 5.5-ft-thick veins. The bleached country rock exhibits chloritic alteration. One vein is exposed for 200 ft and a shear zone is exposed for 400 ft along a northwest strike.	Five adits (125, 75, 60, 38, and 37 ft long) and 10 pits. One adit has a flooded winze (depth unknown) and another has a 25-ft stope to the surface.	A total of 26 chip samples were taken. Of 16 which contained detectable gold, 8 contained from 0.021 to 1.059 oz/ton and 8 contained from 0.0003 to 0.007 oz/ton gold. Of 19 which contained detectable silver, 4 contained from 1.1 to 33.6 oz/ton and the remainder ranged from 0.003 to 0.936 oz/ton silver. Three of 9 samples with detectable lead contained from 0.29% to 2.6%; the remainder ranged from 0.0170% to 0.055% lead. Six contained low levels of copper (<0.02%), 10 contained low levels of zinc (<0.083%), and 8 contained low levels of molybdenum (0.0006% to 0.0022%). The few, sporadic, high-grade samples, the size of the structures, and the geologic setting indicate further sampling and exploration for gold and silver resources with byproduct lead are warranted.
543	Prospect	0060711794 T11N R14E sec.21	Two, 1-in.-thick quartz veins trend north in lenticular to banded gneiss east of the East Providence fault. Quartz is white to clear or light pink with occasional vugs and boxworks.	One caved inclined shaft was about 50 ft long.	Of two select samples of quartz, one contained 0.01 oz/ton gold, 0.2 oz/ton silver, 0.0093% copper, 0.0021% lead, and 0.0037% zinc. Gold sample value and proximity to East Providence fault suggest the prospect merits additional investigation.
544	Good Hope mine	0060711795 T11N R14E sec.21	A quartz-filled, brecciated shear zone strikes east for 690 ft, dips steeply to the north and averages 2.7 ft thick. The zone is truncated on the east by a north-striking fault and on the west it disappears beneath a volcanic cap. Country rock is Precambrian metamorphic rocks with Tertiary volcanic caps on ridge tops.	Two adits, 140 and 40 ft long, connected by a raise, and three pits.	The deposit contains an indicated subeconomic resource of 4,400 tons averaging 0.070 oz/ton gold and an inferred subeconomic resource of 32,000 tons at an average grade of 0.031 oz/ton gold. Of 16 chip samples, 13 contained a trace to 0.256 oz/ton gold and 1 contained 0.2 oz/ton silver. No copper or lead were detected. The size and grade of the deposit indicate additional gold resources may be present at depth.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
545	Prospect	0060711796 T11N R14E sec.28	Workings are in a limestone-gneiss contact zone 4 to 20 ft wide along the north-trending East Providence fault. Limestone is brecciated and healed with calcite. Limonite staining and minor secondary copper minerals were observed in the gouge zone in gneiss.	One pit and one 38-ft-long adit.	Of five chip samples, two contained 0.1 oz/ton silver and one contained 0.01% copper.
546	Sunny Boy Extension placer prospect	0060713060 T11N R14E sec. 28	Fluvial sediments are from the Barber Canyon washes; upper tributaries are well scoured in steep, narrow canyons. The predominantly gneissic with minor volcanic sediments are 95% sand and pea gravel with 1%-5% gravel at 1 to 2 in., and 1%-2% silt and clay; black sands range from 3% to 10%. The Sunny Boy Extension was located in NW1/4 sec. 28, T11N, R14E, S.B.M., in 1955.	None.	No gold was observed in two 0.38 ft <sup>3</sup> reconnaissance pan samples; both contained traces of garnet.
547	Red Rock prospect	0060710836 T11N R14E sec.28	The north-trending, east-dipping East Providence fault is exposed for about 2,000 ft along a contact between limestone on the west and gneiss on the east. Limestone is brown to gray and commonly brecciated throughout a 2- to 5-ft-thick zone which is calcite-hematite healed.	One partially caved vertical shaft, two adits, 4 and 10 ft long, two pits, and one exploratory drill hole.	Of one select and six chip samples, only the select sample contained trace gold. One sample contained 0.1 oz/ton silver. Copper values ranged from nil to 0.0010%, lead values from nil to 0.01%, and zinc from 0.0008% to 0.0033%. Although the assay values are low, past producers to the north and south on the same structure indicate the property merits additional investigation for resources of silver, lead, and gold.
548	Limestone outcrop	0060711838 T10N R14E sec.05	Hazzard (1954) described several northeast-striking, southeast-dipping, thick sections of limestone cropping out for as much as 7 mi as follows: 1) Bullion Member (250-350 ft thick) and part of the Yellowpine Member (75-125 ft thick) of the Mississippian Monte Cristo Limestone, 2) Crystal Pass (250-300 ft thick) and Upper Valentine (350-400 ft thick) Limestone Members of the Devonian Sultan Limestone, 3) Upper Cambrian Chambliss Limestone (170-220 ft thick), and 4) marine derived portions of the Triassic Moenkopi Formation (500 ft thick).	None.	Of eight grab samples of limestone, two contained 85.7% and 89.4% CaCO <sub>3</sub> and six contained from 91.6% to 95.5%. Four samples contained >1% SiO <sub>2</sub> . Sample analyses suggest this limestone is suitable for cement or intermediate-grade industrial applications; it will probably not be of economic significance until the depletion of limestone resources closer to metropolitan markets.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
549	Prospect	0060711775 T11N R14E sec.30	Granite gneiss near a contact with quartzite contains numerous northwest-trending shear zones, a N. 70° E. striking, 50° SE. dipping quartz vein, and a northwest-trending porphyritic andesite dike. Secondary copper minerals occur along fracture surfaces in the shear zones and the 0.7-ft-thick quartz vein contains numerous iron-oxide filled, boxwork structures.	Eight pits and one trench.	Of seven chip and one grab sample, seven contained 0.0008 to 0.042 oz/ton gold, six contained 0.006 to 0.068 oz/ton silver, and minor copper, lead, and zinc were detected. Contact environment and gold sample analysis indicate that further studies are warranted.
550	Prospect	0060711774 T11N R13E sec.25	Two subparallel shear zones strike N. 25°-40° E., dip 42°-85° NW. and form a zone 2 to 3 ft thick in granite gneiss.	One 16-ft adit.	One chip sample contained 0.0003% copper and 0.0016% lead; no gold or silver detected.
551	Prospect	0060711772 T11N R13E sec.25	At the incline, two parallel quartz veins 3.0 ft thick, striking N. 75° W. and dipping 60° SW. can be traced for about 50 ft in granitic country rock. The veins contain chalcopryite, chrysocolla, and limonite after pyrite. Both veins are truncated by a fault just below the ground surface. The country rock shows chloritic alteration near the veins. At the adit, two 4-ft-thick shear zones intersect in gneissic country rock.	One 15-ft-deep incline and one 6-ft-long adit.	One chip sample taken across the two veins contained 0.240 oz/ton gold and 0.245 oz/ton silver, 0.379% copper, 1.2% lead, and 0.060% zinc. A second chip sample contained 0.0026 oz/ton gold, 0.032 oz/ton silver, 0.0018% copper, 0.050% lead, and 0.0095% zinc. Sample analyses of gold, silver, lead, and possibly copper suggest further investigation is needed.
552	L'Chacana prospect	0060711773 T11N R13E sec.25	A 1- to 4.5-ft-thick quartz vein crops out along a north-trending ridge of granite gneiss country rock for about 800 ft. The vein contains minor amounts of secondary copper minerals. About 150 ft to the east a stockpile (?) of quartz vein material contained some galena along with secondary copper minerals. The end of the shaft dump contains pegmatite with a brecciated matrix displaying disseminated pyrite and sericitic and argillic alteration. A shallow intrusive contact is indicated.	One 100-ft-deep inclined shaft, one caved adit, two pits, and one trench.	Of 10 chip and 4 grab samples taken, 1 grab sample contained 0.046 oz/ton gold and 0.577 oz/ton silver, 5.8% lead, 0.171% copper, and 0.289% zinc. Another grab sample contained 0.0178 oz/ton gold, 0.0467 oz/ton silver, 0.0007% copper, and 0.0023% lead. Of seven chip samples on the main vein, six contained from 0.0026 to 0.007 oz/ton gold along with minor silver, copper, lead, and zinc. Geologic environment and sample analyses suggest that the property should be studied in detail to determine if vein or disseminated gold resources with byproduct lead, silver, zinc, and possibly copper are present at depth.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
553	Prospect	0060711770 T11N R13E sec.25	Numerous, localized shear and silicified zones, 0.3 to 2.2 ft thick, some containing quartz veins, occur in granitic to gneissic country rock. General trend of the structures is east-northeast with variable dips. Metallic minerals in veins include galena, chalcopryite, pyrite, and secondary copper minerals.	Two adits, 25 and 17 ft long; one shaft, 10 ft deep; three pits.	One of five chip samples contained 0.25 oz/ton gold and 1.5 oz/ton silver along with 0.66% copper, 11.9% lead, and 0.0045% zinc. The four remaining samples contained 0.003, 0.004, 0.037, and 0.048 oz/ton gold with silver ranging from 0.020 to 0.41 oz/ton, copper ranging from 0.0087% to 0.0170%, lead ranging from 0.077% to 0.239%, and zinc ranging from 0.0023% to 0.0075%. High gold, silver, and lead values, the presence of anomalous copper, and similar properties in the area indicate that the property merits additional investigation.
554	Pink Jack prospect	0060711769 T11N R13E sec.26	Granite gneiss is intruded by west-northwest-trending, south-dipping pegmatite and andesite dikes. The country rock adjacent to the dikes exhibits intense alteration; shearing occurs along the country rock and dike contacts. Sulfides are rare but relict sulfide textures and boxwork structures are common along with iron oxides; minor secondary copper minerals in pegmatite dikes. Mineralized zones are 1 to 6.5 ft thick.	Two adits, 220- and 5-ft-long; one shaft, about 50 ft deep; and four pits.	Fifteen chip samples were taken. Thirteen of the samples contained detectable gold ranging from 0.0006 to 0.56 oz/ton. Nine of these samples contained >0.03 oz/ton gold and had a weighted average of 0.157 oz/ton. All samples analyzed contained values ranging from 0.0009 to 0.093 oz/ton silver, 0.0006% to 0.266% copper, 0.0031% to 0.089% lead, and 0.0023% to 0.021% zinc. Significant gold assay values coupled with proximity to other properties with high gold values indicate further exploration is warranted.
555	Prospect	0060711771 T11N R13E sec.25	Quartz veins, in or near a west-northwest-trending, northeast-dipping fault (?) contact between quartzite and gneiss are iron-oxide stained and commonly contain limonite pseudomorphs after pyrite. Veins are 1 to 3.5 ft thick.	Two pits and one 10-ft incline.	Of three chip samples, two contained 0.002 oz/ton gold. Three contained from 0.002 to 0.122 oz/ton silver, 0.0011% to 0.0067% copper, 0.0045% to 0.0074% lead, and 0.0086% to 0.062% zinc. Gold sample analyses indicate further study is warranted.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
556	Prospect	0060711779 T11N R13E sec.26	One north-northwest-trending massive pod and numerous veinlets of specular hematite occur in, and are associated with, pegmatite dikes in a gneissic to granitic country rock. The zone is discontinuously exposed for 550 ft and is 2.6 to 4.6 ft thick.	One 12-ft-deep shaft and one pit.	In four chip samples, gold ranged from 0.0026 to 0.0035 oz/ton, silver ranged from 0.0058 to 0.044 oz/ton and iron (Fe) ranged from 3.8% to 7.1%. Size of structure and gold sample analyses indicate that the property merits further investigation.
557	Quartzite outcrop	0060711840 T11N R10E sec.35	The Prospect Mountain Quartzite section is from 50 to several hundred ft thick, crops out for about 3 mi, strikes east-northeast and dips 20°-40° SE. (Ver Planck, 1966). Outcrops are buff, orange, or red and may be banded due to cross bedding.	None.	One sample of quartzite contained 94.0% SiO <sub>2</sub> ; however, Fe <sub>2</sub> O <sub>3</sub> is 2.3% and Al <sub>2</sub> O <sub>3</sub> is 2.5%. Deposit is of doubtful economic significance for industrial grade SiO <sub>2</sub> .
558	Lopez No. 3 prospect	0060711780 T11N R13E sec.36	Interbedded limestone and shale are intruded by a porphyritic andesite near the base of the Paleozoic sedimentary assemblage (Hazzard, 1954). Discordant and concordant shear zones and breccias contain some pyrite and considerable amounts of iron oxides with minor copper-oxide staining. One sulfide-rich zone is 0.3 to 1.2 ft thick, strikes east-northeast and dips 30°-40° SE.	Two adits and an inclined shaft totaling 168 ft.	Gold assays in six of eight chip samples ranged from 0.006 to 0.11 oz/ton; six silver assays ranged from 0.23 to 1.8 oz/ton; four lead values were from 1% to 9.7% and one zinc value was 2.62%. Gold, silver, lead, and zinc assay values indicate that the property merits additional investigation.
559	Iris Fin prospect	0060711781 T11N R13E sec.36	The actual location of this claim is uncertain. One sample was taken along a shale and limestone contact.	One pit.	One chip sample contained 0.2 oz/ton silver, 0.0099% copper, 0.015% zinc, and 0.0016% molybdenum.
560	Black Jack mine	0060711783 T11N R13E sec.36	The deposit consists of a fault-bound, north-trending, steeply west-dipping lens or block of specular hematite with minor magnetite in limestone and shale metasediments of Paleozoic age (Hazzard, 1954). It lies about 3/4 mi east of and 400 ft in elevation above the metasediment contact with Precambrian gneissic rocks underlain at shallow depths by granitic rock. The deposit crops out for 300 ft along strike, is 60 to 80 ft thick and is up to 145 ft deep.	One 45-ft-long adit, one 115-ft-deep shaft, two pits, and six diamond drill holes. Patented claim.	The deposit is estimated to contain an indicated subeconomic resource of 230,000 long tons at a grade of 55% to 60% iron. Four chip samples across large outcrops contained 52% to 60% iron, 0.02% to 0.05% phosphorous, 0.08% to 0.22% sulfur, and 3% to 24.1% SiO <sub>2</sub> . In previous analyses by industry, iron ranged from 56% to 58%. Resources beyond those calculated are not indicated; the deposit appears to be bounded by faults.
561	Prospect	0060711782 T11N R13E sec.36	A 1-ft-thick gouge zone containing chlorite strikes N. 60° E. and dips 65° SE. in shale or phyllite. An iron-oxide-stained breccia pod occurs in limestone; the breccia is vuggy and yellow, red, brown, and	One 12-ft-long adit and one trench.	Two samples contained no gold or silver.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
			black.		
562	Tough Nut mine	0060711777 T11N R14E sec.30	Upper workings are in carbonate rocks and one lower working is in shale and quartzite. Mineralized zones occur as irregular, 1- to 6-ft-thick replacement pods and lenses predominantly in carbonates. The main zone is along an east-trending, south-dipping fault that offsets shale and quartzite. Gangue is calcite with possible barite. Minor pyrite and pyrrhotite occur in the lower working. Possible lead sulfates or carbonates are in the mineralized zones. The mineral assemblage is very similar to those at the Silver King (Perseverance) and Bonanza King mines (Map nos. 568 and 565, respectively).	The lower working is a 360-ft adit with two drifts. The upper workings consist of three adits totaling 46 ft, four inclined shafts with stopes totaling at least 300 ft, and nine prospect pits. No production recorded; however, some production indicated by: 1) stopes, 2) high grade samples, 3) old millsite, and 4) similarity of geology to nearby past producers to the east.	Of 30 chip, 4 random chip, and 2 grab samples taken, most of the 26 samples from workings in carbonate rock contained detectable gold and silver. Values ranged from 0.0012 to 2.01 oz/ton gold and 0.012 to 67.2 oz/ton silver. Three samples had more than 0.1 oz/ton gold and five samples had more than 1.0 oz/ton silver. Lead values ranged from 0.003% to 2.9%; zinc ranged from 0.0005% to 0.49%; and copper ranged from 0.001% to 0.035%. The exposed mineralized structures are largely mined out; however, the probable past production, the sporadic but high assay values, and the similarity of geology to significant past producers to the east suggest the property merits further investigation for gold, silver, lead, and possibly, zinc resources at depth.
563	Prospect	0060711776 T11N R14E sec.30	Fault gouge zones occur between gneissic rock to the northwest and metasediments to the southeast. The fault zone trends north-northeast and is 18 ft wide.	Two adits (25 and 48 ft long).	Three of four chip samples contained 0.1 to 0.3 oz/ton silver; copper ranged from 0.0004% to 0.0012%, lead was constant at 0.0023% and zinc ranged from 0.0047% to 0.0072%.
564	Lopez No. 1 prospect	0060711778 T11N R14E sec.	The 4- to 10-ft-thick mineralized zones occur along north-trending faults within and at the contacts between limestone, shale, and quartzite at the base of the Paleozoic sedimentary assemblage (Hazzard, 1954). Chrysocolla, malachite, and azurite occur in the zones along with iron oxides, quartz, and coarse crystalline calcite. The main zones is exposed for about 75 ft.	One 45-ft adit and two pits.	Of one grab and five chip samples, four contained 0.004 to 0.012 oz/ton gold and three contained 0.018 to 0.092 oz/ton silver. Two samples contained 1.18% and 4.7% copper, mostly in the form of secondary copper minerals. Minor lead was also detected. Gold and copper sample analyses indicate further study is warranted.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
565	Bonanza King mine	0060710236 T10N R14E sec.03	The deposit occurs as 4- to 20-ft-thick replacement bodies in brecciated carbonate rocks along an echelon cross-breaks (tension fractures) between the north-northeast-trending, east-dipping East Providence fault and a westerly dipping or vertical boundary fault on the west. The bounding faults diverge with depth; having a 100 ft span at the surface and a 500 ft span on the fifth level of the main working. Mineralized zones are recognized by calcite and red iron-oxide in fractures and contain one or more of the following: argentite, cerargyrite, bromyrite, galena, cerussite, sphalerite, smithsonite, malachite, and pyrite.	Workings consist of one large multilevel development, one tunnel, seven adits, (three caved), six trenches, and seven pits. The three larger adits total 560 ft of drifts and crosscuts. The large working consists of an 800-ft-deep shaft (500 ft vertical and 300 ft inclined) which serviced eight levels; an intermediate level and five main levels are accessible and total more than 7,400 ft. The overall main working is developed by about 20,000 ft of drifts, crosscuts, stopes, and manways (Wright and others, 1953). Production from 1883-1887 was valued at \$1.8 million, primarily from silver (Mining World, Feb. 6, 1906, p. 225-226), and more than 5,302 tons produced from 1901-1960 contained 56.57 oz gold, 82,272 oz silver, 913 lb copper, 69,275 lb lead, and 2,312 lab zinc (USBM statistical files) (patented claims).	On-site dumps and tailings contain 19,000 tons of inferred subeconomic resources averaging 4.1 oz/ton silver. Seventy-three chip, 18 random chip, 3 grab, and 1 select sample taken. Of 32 samples with gold, 14 contained a trace, 17 contained 0.0002 to 0.23 oz/ton and 1 contained 1.28 oz/ton. Thirty-seven samples contained 0.04 to 0.9 oz/ton silver, 23 contained 1.0 to 8.6 oz/ton silver, 8 contained 12.8 to 56.6 oz/ton silver, and 1 contained 75.5 oz/ton silver. Copper, lead, and zinc are ubiquitous; copper values were generally 0.001% to 0.01% while lead and zinc values were an order of magnitude higher. Five lead values and four zinc values occur in the range of 1%-5%. Production data, mapping and sampling data, and drill intercepts indicate the property merits further investigation for additional silver, gold, lead, copper, and zinc resources at depth.
566	Dimension stone quarry	0060711837 T10N R14E sec.03	Orange, buff, and gray welded tuff beds crop out on a small hill adjacent to the East Providence fault.	One quarry. Possible production of several hundred tons of dimension stone used to construct buildings of Providence townsite.	No samples. Large tonnage available of stone primarily suitable as a dimension stone. The quarried stone must usually be split or cut which would increase the cost and, therefore, decrease profitability. The deposit is not considered to be economically significant except for local use.
567	Silver Queen-Golden Horse placer	0060712316 T11N R14E sec.33	Predominantly coarse sands and gravels of gneissic composition are from a north-trending dry wash which passes through 3 mi of sheared and altered rocks along the hanging wall of the East Providence Fault. The Silver Queen and Golden Horse claims were located in 1955 and 1961, respectively, in the W1/2 sec. 33, T11N, R14E, S.B.M.	None.	One 0.38 ft <sup>3</sup> reconnaissance pan sample from the active channel contained three gold particles with a total weight of 0.008 mg. The gold was dull, chunky, and subrounded to subangular. Value of the material is estimated to be less than \$0.01/yd <sup>3</sup> at a gold value of \$400/oz.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
568	Silver King mine (Perseverance mine)	0060710274 T11N R14E sec.33	Mineralized pods and lenses in fissures and calcite and quartz cemented breccia zones 1.5 to 10 ft thick occur near fault intersections with the north-trending, east-dipping East Providence fault. Some significant metal values occur locally along 1,200 ft of the main fault and 750 ft of the west-trending splinter fault. Minerals include argentite, argentiferous galena, cerussite, silver chlorides and bromides, malachite, anglesite, and willemite.	Workings consist of 4 shafts, 7 adits, 11 trenches, and 14 pits. Adits are 10 to 30 ft long; one shaft is 50 ft deep with a 25-ft drift, and one is 162 ft deep with 1,350 ft of drifts and crosscuts. From 1918-1920, mine production (USBM statistical files) was 20 tons containing 6.98 oz gold, 1,489 oz silver, 11 lb copper, and 232 lb lead. Tucker (1920) estimated \$250,000 production in 1880's.	Of 41 chip, 4 random chip, and 2 grab samples, 14 contained detectable gold and 27 contained detectable silver. Six contained a trace and 8 contained 0.01 to 0.04 oz/ton gold. Thirteen contained 0.1 to 0.9 oz/ton and 14 ranged from 1.9 to 7.7 oz/ton silver. Copper ranged from 0.0005% to 0.0098% in 26 of 27 samples analyzed, lead ranged from 0.0021% to 0.266% in 21 of 22 samples analyzed, and zinc ranged from 0.0051% to 0.36% in 22 samples analyzed. Production history and assay values suggest additional silver, gold, lead, and copper resources may be present at depth. Based on the surface exposure, mineralized zones are expected to be about 5,000 to 10,000 tons.
569	Unnamed prospect	0060712226 T11N R15E sec.06	Altered granitic rocks with red spotty alteration.	One pit.	Altered granitic rock with earthy clay gouge along fractures. One grab sample (CJO-24).
570	Gold Valley mine	0060711111 T11N R15E sec.06	Quartz vein within quartz monzonite, trending northwest and dipping 32-40° SW.	Two drifts on two levels totalling 60 and 75 ft; one inclined shaft 230 ft deep.	Quartz vein and dark green medium-grained intrusive rock. One grab sample (CJO-23) contained 531 ppb gold.
571	Unnamed prospect	0060712224 T12N R15E sec.21	Flat lying quartz and silicified granitic rocks strike N. 80° E., and dip 15° SE. in grussy granitic rocks grading to fresh unaltered rock.	Two pits (one filled) with sediment.	Copper silicate-stained quartz vein material. One grab sample (CJO-22) contained 20.9 ppm gold, 47 ppm silver, 3,800 ppm copper, and 950 ppm lead.
572	Unnamed prospect	0060712777 T12N R15E sec.31	A flat lying sill (strike N. 20° E. and dip 20° SE.) is dark gray, fine-grained with white quartz; local country rock is coarse, grussy, granitic rocks near the dike grading to fresh unaltered rock within 10 ft of the structure.	One caved incline (?).	Dark, fine-grained dike with milky quartz; no visible sulfides. One grab sample (CJO-21).
573	Lost Burro II	0060712987 T12N R15E sec.31	Massive milky quartz outcrop in gray-tan medium-grained granitic rocks. Quartz locally fractured with minor FeOx filling. The outcrop is 40 ft wide, 50 ft long.	One pit/trench.	White, massive quartz with local iron-oxide-filled fractures. No apparent mineralization. One grab sample (CJO-33) contained 58 ppb gold.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
574	Lost Burro	0060712223 T12N R15E sec.31	Quartz and quartz breccia within gray-tan medium- to coarse-grained granitic rocks. Quartz has massive pyrite and arsenopyrite (?); not seen in place.	One shaft.	Quartz and quartz breccia with disseminated pyrite and minor arsenopyrite. One grab sample (CJO-32) contained 7.2 ppm gold, 380 ppm cobalt, and 19 ppm silver.
575	Unknown (Von claims) FRM Minerals Inc.	0060712834 T11N R16E sec.01	The property is underlain by rhyolite and tuff (pumiceous unwelded to densely welded). A probable fault runs along the contact between the rhyolite and tuff at about N. 15° E. The volcanic rocks appear to have been argillically altered and silicified (chalcedony/opal in veinlets and as drusy quartz in cavities. No mineralization observed.	Two adits: one adit is open but water-filled at about 50 ft, and the other adit is collapsed at portal.	One sample (CTN-51) of argillically altered and silicified tuff contained 1,500 ppm barium.
576	Unknown (Hack claim group) Harold Linder	0060712645 T11N R16E sec.14	The property is underlain by rhyolite and dacite flows and breccias. A N. 70° E. trending, 60° SE. dipping fault crosses the property. The shear zone has been silicified (quartz/chalcedony) and slightly argillically altered.	One inclined shaft, two pits, and one trench. The shaft inclines at 45° and is at least 100 ft deep. No production record.	One sample (CTN-23) of brecciated and silicified rhyolite contained 212 ppb gold.
577	Ben Hur (Lucky Penney claims) (Anaconda)	0060712641 T11N R16E sec.12	The prospect area is underlain by a porphyritic dacite. The dacite is brecciated along a north trending, vertical dipping fault zone. Slight hydrothermal alteration occurs near the zone of shearing.	One 48-ft-long adit, one inclined shaft, and three small pits. No production.	One sample (CTN-11) of fractured, iron-oxide-stained and altered dacite contained 6 ppb gold and 3,400 ppm barium.
578	Denver mine (Lucky Penney claims) (Crater, Mitchell, Getchell) Harold Linder/Channel Resource	0060710091 T11N R17E sec.08	The property is underlain by a series of Tertiary-age rhyolite to dacite flows and flow breccias, dacite porphyry intrusive rocks, tuffs, and welded tuffs lying upon Precambrian granite gneiss that has been intruded by alaskite dikes. Mineralization consists of free gold, silver, copper, and lead in quartz/chalcedony veins and stringers in brecciated rhyolite related to a northeast-trending fault system. Alteration consists of sporadic kaolinization and argillization.	Three adits (main adit >500 ft in length; others less than 30 ft), two shafts, and nine pits and cuts (largest 18 ft by 6 ft by 6 ft deep). The first known production was in 1917. The mine was intermittently operated and developed to 1958. U.S. Bureau of Mines records indicate 159 oz gold, 52 oz silver, and 3,802 lb of lead were produced.	Four samples (CTN 12-14 and 16) of brecciated and silicified rhyolite contained up to 350 ppb gold, a grade comparable to that being mined at open-pit, heap leach gold mines elsewhere in the western United States. The samples contained elevated values of antimony and arsenic.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
579	Getchell Clay mine (Hack Claim Group) Harold Linder	0060711936 T11N R17E sec.19	The deposit consists of bentonitic and zeolitic clay probably formed through hydrothermal alteration of a northwest-trending, easterly dipping rhyolite-tuff situated along a northeast-trending fault zone. Lacustrine sediments on the property indicate that the minerals may have formed from alteration of a water-lain tuff.	Workings on the property consist of several pits, bulldozer cuts, and three small adits. No production record. The size of the property and the presence of a 20-ton stockpile may indicate small production within last 20 years.	Two samples (CTN 17, 18). CTN-17 is from bentonite outcrop and stockpile. CTN-18 is brecciated rhyolite taken on shear zone. The exposed portion of the deposit is about 500 ft in length, 300 ft in width, and 50-100 ft in thickness.
580	Unknown (SOL claims) FRM Minerals, Inc.	0060712642 T11N R17E sec.07	Property is underlain by a flow-banded rhyolite and porphyritic dacite. The rhyolite is brecciated over wide area (possible flow breccia). Narrow shear zones cut rhyolite along northeast, steeply dipping zones. Shear zones are silicified (chalcedony/quartz), argillically altered, and contain minor amounts of pyrite and galena.	Four inclined shafts, two adits (66 ft and 25 ft long), and pits and cuts. No production records.	Four samples (CTN 7-10) of brecciated and silicified rhyolite contained from 150 ppm to 420 ppm zinc.
581	Lucky Penney (Crater group) Joan Kasprowitz	0060712640 T11N R17E sec.07	Brecciated pink to red rhyolite country rock. A N. 20°-25° W. shear zone cuts the rhyolite, dipping 35°-70° NE. The shear zone has been silicified and argillically altered. Veinlets of chalcedony/quartz contain finely crystalline chalcopryite and possible galena.	Two adits (one 60 ft long, one about 150 ft long) and four pits (4 ft by 4 ft by 4 ft; 4 ft by 6 ft by 4 ft; 4 ft by 5 ft by 4 ft; 6 ft by 6 ft by 4 ft). No production records.	Two select chip samples (CTN-5, -6) of silicified brecciated rhyolite. Veinlets of chalcedony/quartz contain finely crystalline chalcopryite and possible galena. Moderate iron oxides (limonite and hematite) in fractures and vugs. Both samples contained elevated values of antimony (41 ppm, 76 ppm) and arsenic (103 ppm, 131 ppm).
582	Unknown (Lucky Penney claim group) Harold Linder/Channel Resource	0060712639 T11N R17E sec.08	The country rock is a light to medium gray pumiceous tuff. The tuff is brecciated and silicified in a northeast-trending zone and is characterized by chalcedony in vugs and along fractures. Minor amounts of chalcopryite with halos of malachite/azurite are present. Iron-oxide-staining (limonite and hematite) is prevalent.	One trench (25 ft by 4 ft), one open cut (30 ft by 6 ft), and one pit (4 ft by 6 ft by 6 ft). No production.	One sample (CTN-4) of brecciated and silicified tuff. Minor amounts of chalcopryite with halos of malachite/azurite are present in narrow (<1 cm) veinlets of chalcedony/quartz. Sample contained anomalous antimony (46 ppm) and arsenic (97 ppm).
583	King prospect (Von, Sol, Craters group) FRM Minerals, Inc.	0060712638 T11N R17E sec.08	A pink-to-red rhyolite tuff has been brecciated and silicified; possible vent breccia. The silicified zone is argillically altered and contains concentric nodules and veinlets of chalcedony/quartz. Localized lapilli tuffs and vitrophyres are also present.	One open cut about 60 ft long. No production.	One sample (CTN-3). Random chip of silicified rhyolite cut by veinlets, concretions, and vugs filled with chalcedony/quartz. Sample contained anomalous antimony (32 ppm) and arsenic (107 ppm).

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
584	Unknown (Hack claim group) Harold Linder/Channel Resource	0060712636 T11N R17E sec.08	The property is underlain by a pumiceous welded tuff and vitrophyre. The rocks are brecciated along N. 6° E. trending, 26° NW. dipping shear zone. The zone has been silicified, evidenced by chalcedony/quartz veinlets cross-cutting the tuff. The zone is argillically altered.	Two bulldozer cuts (about 200 ft by 8 ft, and 250 ft by 8 ft) follow east and west extensions of the silicified zone. No production.	One sample (CTN-1) of brecciated and silicified tuff contained no significant concentrations of precious or base metals.
585	Unknown Harold Linder	0060712637 T11N R17E sec.05	Lacustrine deposited calcareous siltstone, sandstone, and limestone with opalite. Probable playa sediments deposited between episodes of volcanic activity. Common opal forms layers within limestone.	Five pits, all less than 6 ft in diameter. Opal collecting pits are used by rock hounds.	One random chip sample (CTN-2) of common opal contained no significant concentrations of precious or base metals.
586	Maggies Dream Margaret and Felix Roman	0060712643 T11N R17E sec.05	Property is underlain by lacustrine deposited limestone, opalite, and unwelded tuff. Common opal forms horizontal layers within white limestone layer.	Three pits and trenches (largest 20 ft by 10 ft by 4 ft deep). Pits used by rock hounds to collect common opal.	Two samples (CTN-24, -26) of limestone-opalite layer and two samples (CTN-52, -53) of paleostream sand and silt.
587	Unknown (Rich claim group) Robert Wetzell	0060712644 T12N R17E sec.31	The prospect is underlain by lacustrine deposited limestone, opalite, and unwelded tuff.	One 35-ft-long adit. No production.	One sample (CTN-25) of limestone-opalite layer.
588	True Blue Unknown	0060710193 T12N R17E sec.33	Precambrian granitic rocks - Metamorphosed with chlorite - malachite/azurite staining on dump. Extensive evidence of hydrothermal alteration.	Workings consisted of five shafts (one 30 ft deep) and about six pits. Most workings and dumps have been bulldozed shut and no trace of possible ore exists. No evident trenches or zones exist on the surface.	Four samples, CAL 4-5 and 30-31, taken from selected material from dumps. Malachite/azurite chloritized Precambrian granitic rocks. No visible sulfides. Samples contained up to 8,440 and 4,560 ppb gold and 0.8% and 0.6% copper.
589	Scando Unknown	0060710179 T12N R17E sec.34	A chloritized and hydrothermally altered quartz vein (strike N. 65° E., and dip 50° NW) is in metamorphosed granitic rocks.	One inclined shaft of unknown depth (about 100 ft) and one pit.	One sample (CAL-9) from dump quartz vein with minor galena and pyrite as discrete clots or grains. Malachite and iron oxide staining. Sample contained 19,300 ppb gold, 72 ppm silver, and 2,200 ppm lead.
590	Cominco (Bobcat/Cat) Cominco	0060712401 T12N R17E sec.34	Precambrian metamorphic granitic rocks chloritized with hydrothermal alteration. Quartz veins (strike N. 10° E., and dip 55° NW.) show evidence of shearing after or at time of emplacement. Veinlets of chalcedony (red-to-opaline in color and appearance) within the quartz veins. Another vein trends about N. 60° E. A ridge of metamorphic rocks has a banded gneissic appearance with migmatite	Two shafts (one 60 ft; the other 20 ft), approximate 15 pits. Production is unknown.	Two samples (CAL 6-7) of quartz vein, both with red chalcedonic veinlets; some sulfides may be associated with the veinlets. Some white sugary, iron-oxide-stained quartz is in both vein structures. Samples contained up to 2,000 ppb gold.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
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591	American Flag Unknown	0060710063 T12N R17E sec.35	Metamorphosed granitic rock-vein is composed of quartz, white sugary with iron-oxide staining; the other is red stained with grey sulfides (<1%). Some red chalcidony occurs as veins and veinlets in this quartz. Basic dikes are in the immediate area. The veins trend N. 50° E., and dip 50° SE.	Two inclined shafts of unknown depth but are at least 100 ft long. Production unknown.	One sample (CAL-8) from dump - quartz vein with minor sulfides; malachite and azurite; minor iron oxide staining and red chalcidony. Sample contained 4,120 ppb gold.
592	Rattlesnake mine George Wright / Norman Bryan	0060711851 T12N R18E sec.30	Quartz diorite-to-quartz monzonite gneiss occurs with biotite schist and alaskite. A large zone of mylonite exists in the vicinity of the older workings.	Numerous pits and several shafts. No known production. The deepest shaft is in excess of 50 ft deep. Recent work resulted in an open pit 300 ft in diameter and 30 ft deep from which material was extracted for heap leaching. A leach pad (200 ft by 100 ft by 15 ft) containing about 20,000 tons of material exists at the property.	Twenty samples (CAL-27, 70-80, 93-100) from pits and shafts in the area. No resources calculated. Samples contained up to 784 and 662 ppb gold and >1% copper.
593	California (Von Trigger) Unknown	0060710056 T11N R17E sec.10	Precambrian granite gneiss cut by two major shear zones (Medbury and Goodwin) that strike N. 30° E. The ore consists of chalcopryrite and minor cuprite.	six shafts are in the area and four adits. The shafts are up to 467 ft deep. A total of 1,012 ft of shafts and raises and 1,520 ft of crosscuts and drifts have been excavated at the mine. Records indicate that 3,729 tons of ore were shipped containing 5% copper, 0.05 oz/ton gold, and 0.5 oz/ton silver.	Five samples were taken (CAL 16-19, 26). Reportedly 250,000 tons of 4% copper ore remain in place at the mine. All the workings have been bulldozed shut.
594	Lord and Irish (Tungsten Flat) Unknown	0060712919 T11N R18E sec.09	Quartz monzonite occurs with numerous northwesterly trending, northeasterly dipping quartz veins. The quartz veins appear to follow shear zones.	Numerous shafts (about 28) and pits (about 40) have been excavated in an area of about 2 mi <sup>2</sup> . The deepest shafts are about 50 to 60 ft. No production records were found, but a reported 20 lb of tungsten was shipped in the 1920's.	Thirty-four samples (CAL 20-29, 32-50, 58-59, 62-63, 86-87, 90) were taken in the Tungsten Flat area. No resource calculations were done. Samples contained as high as 13,700 and 2,290 ppb gold, 2,130 ppm silver, 12,000 and 5,190 ppm tungsten, 6,400 ppm zinc, 0.9% and 0.7% copper, and 720 ppm lead.
595	Unknown None	0060712395 T11N R18E sec.13	Cretaceous granitic rocks with quartz flooding; numerous shear and quartz veins with dikes that range from gabbro to lamprophyre. All structure and veins or dikes trend N. 15°-30° W. and appear to be vertical. The workings follow two parallel trends and mineral-bearing zones.	No known production. Workings consist of one adit (about 60 ft long), two shafts (18 and 30 ft deep), about 10 pits or trenches (up to 35 ft long).	Three samples (CAL 1, 2, 3); one from each shaft and adit. Samples contained up to 1,050 ppb gold, and >1% copper.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
596	Leiser Ray (California Comstock) Unknown	0060710390 T11N R18E sec.16	Quartz monzonite with basic dikes and bull quartz veins. The dikes and quartz veins generally trend N. 60°-80° W. and dip steeply to the northeast.	About ten shafts and 50 pits are in a 1/2 mi <sup>2</sup> area. The deepest shaft is reported to be 900 ft deep. Recorded production is 77 tons of ore (1911, 1935-36) and 40 tons of concentrates, 1917, all yielding 15,130 lb of copper, 1,660 lb of lead, 1,178 oz of silver, and 26.69 oz of gold.	Twenty-four samples (CAL 51-57, 60-61, 64-69, 81-85, 88-89, 91-92) were taken. No resource calculations were made for this area. Samples contained as much as 8,660 and 2,910 ppb gold, 358 ppm silver, 2,700 ppm zinc, >1% copper, and 8,000 ppm lead.
597	Peacock Unknown	0060711204 T11N R18E sec.22	Quartz monzonite with quartz vein. Signal Hill is composed of basalt.	Two pits, one 30-ft shaft. No known production.	One sample (CAL 15) quartz vein (strike N. 60° W. and dip 80° NE) is exposed in the shaft and pits. Sample of grayish, sugary quartz with minor malachite. Sample contained 481 ppb gold, 813 ppm tungsten, 880 ppm zinc, and 1,500 ppm copper.
598	Old Boy Unknown	0060711573 T11N R18E sec.28	Quartz monzonite intrusive rock with quartz veins and basic dikes. The quartz veins trend N. 80° W. and dip 35° NE, and N. 35° W., and 65° NE. The dikes exposed in the wall of a nearby lens dip in directions opposite to the quartz veins while having similar strikes. Quartz zone at shaft is about 6 ft thick.	Two pits and one shaft (55 ft deep). Shaft follows quartz veins 65° to the northeast down dip. No production is known.	Two samples (CAL 13-14) - one from the pit on a quartz vein (strike N. 80° W., and dip 35° NE.) near the wash. The vein is sugary quartz with iron-oxide staining malachite and chalcedony all minor <1% total. The other sample from the shaft dump is similar to quartz at U S Arbor (sugary quartz with disseminated sulfides and minor malachite). Samples contained 25,900 ppm tungsten and 530 ppm zinc.
599	U.S. Arbor Unknown	0060712399 T11N R18E sec.28	Ridge of andesite paralleled by basic dikes and quartz monzonite. The quartz monzonite is pegmatite in places. The structures trend N. 75° W. through the area. Several quartz veins trend through the area N. 25° W., dip 70° SW., N. 75° W., dip 70° SW., and N. 50° W., dip 60° NE.	Seven shafts (inclined) are on the three main vein trends with 10 pits. The shafts are of unknown depth (about 50 ft) with extensive stoping on the main vein. No production is known; however, some production has probably occurred.	Three samples (CAL 10, 11, 12) - one from east and west shafts and one from ore bin at main workings. The samples are of grey sulfide-bearing quartz with minor malachite azurite and iron-oxide staining. Samples contained 1,070 ppm tungsten, 2,500 ppm zinc, and 460 ppm lead.
600	Unknown (Berry claims) Channel Res./H. Linder	0060712835 T11N R17E sec.29	En echelon shear zones striking N. 10° E, dipping 75° NW, cut a dark gray granitic gneiss along foliation planes. Narrow stringers (1/8 in. to 1.0 in.) of chalcedony/quartz have been injected along shear zone. The property is also underlain by rhyolite and an unwelded tuff. Minor argillic alteration.	One vertical shaft (20 ft deep), and three pits (6 ft by 8 ft by 3 ft, 6 ft by 8 ft by 4 ft, and 7 ft by 7 ft by 4 ft). No known production.	Three samples (CTN-33-35). Two samples of silicified and sheared granitic gneiss averaged 1.0 ppm gold (0.029 oz/ton). One sample (CTN-34) of unwelded tuff contained —



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
601	Unknown (Sol claims) FRM Minerals Inc.	0060712836 T11N R17E sec.32	Narrow (2 in. to 1.0 ft) quartz stringers trend northeast along foliation planes in a dark gray quartz-feldspar-biotite gneiss. A secondary shear zone crosses the property at N. 75° W. Mineralization observed includes copper and iron-oxide-stained quartz and gneiss.	Two inclined shafts and one 25-ft-long adit. No record of production is known.	Four samples (CTN-36-39) of copper- and iron-oxide-stained quartz and gneiss contained no significant concentrations of precious or base metals.
602	Gold occurrence Unknown	0060711621 T10N R17E sec.02	Thin (0.2 to 0.8 ft), discontinuous northeast-trending quartz stringers follow foliation planes in a dark gray quartz-feldspar-biotite gneiss. A secondary quartz vein crosscuts the gneiss striking N. 65° W., and dipping 50° NE. A small amount of copper and iron-oxide-stained quartz was observed.	One 40-ft inclined shaft and two shallow pits (10 ft by 5 ft by 4 ft, 6 ft by 4 ft by 3 ft). No known record of production is known.	Two samples (CTN-40, -41) of copper- and iron-oxide-stained quartz contained 11.3 ppm gold (0.3 oz/ton) and 1.7 ppm gold respectively. CTN-40 also contained 1,120 ppm lead (32.5 oz/ton). The samples averaged 680 ppm copper.
603	Gold Star North 1-44 prospect	0060711698 T10N R15E sec.08	Variably trending, generally easterly dipping, localized, 0.1- to 2.8-ft-thick shear zones and narrow quartz veins are associated with a northeast-trending, up-to-several-hundred-ft-wide zone of pervasively and intensively altered intrusive rock. This is a north extension of the Gold Star 1-10 prospect (Map no. 610, herein). Quartz is white to clear and contains pyrite, limonite pseudomorphs after pyrite, siderite, specularite, chrysocolla, malachite, azurite, and possible chalcophyrite.	One 50-ft-deep inclined shaft, two adits, 20 and 60 ft long, and seven pits.	Of 16 samples, 4 contained from 0.010 to 0.324 oz/ton gold and 2 contained silver, 0.4 and 2.3 oz/ton. Of 10 analyzed for copper, 9 contained from 0.03% to 0.72%. The prominent, pervasively altered zone and the sample analyses indicate additional investigation is warranted for vein-type gold and silver with byproduct copper resources at depth.
604	Raindrop prospect	0060711695 T10N R15E sec.06	Localized, 0.5-ft-thick, white quartz veins are oriented N. 60° E., 72° NW. and N. 28° W., 24° NE. in granitic rock; quartz contains abundant limonite pseudomorphs after pyrite.	Three trenches, 40 to 100 ft long.	Two samples contain 0.01% and 0.09% lead; no gold or silver detected.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
605	BC prospect	0060711797 T11N R14E sec.35	Weathered, Precambrian, metamorphosed, intrusive rocks with iron-oxide staining, abundant epidote and rare magnetite veinlets. One minor shear zone strikes N. 20° E. is vertical and contains minor magnetite. This area coincides with a significant aeromagnetic anomaly and was part of a regional area (Vulcan mine-Burro prospect, no. 629) explored by U.S. Steel in the early 1960's. The magnetite skarn pod at the Adams-Ikes Hope prospect (Map no. 607, herein) may be related to this deposit.	Two dozer cuts, two pits, and a slant drill hole of unknown depth; workings spread over about 1/2 mi <sup>2</sup> .	Of one chip and one select sample, no gold or silver was detected and only minor copper and lead were detected in one sample. Based on the exploration history, the aeromagnetic anomaly, and the nearby, small iron body (Adams-Ikes Hope, prospect, Map. no. 607), this prospect should be studied in detail to determine whether or not resources are present.
606	Grande 1-7 mine	0060711694 T10N R15E sec.06	One prominent vein system trends northwest, dips northeast, and crops out for at least 400 ft. The structure is exposed for 140 ft vertically, averages 2.7 ft thick, and contains veins, pods, and blebs of quartz in a gray-green gouge. Nearby, three veins and shear zones cut granitic rock; one contains red jasper with galena and minor secondary copper minerals.	A 90-ft adit with an 8-ft winze, two 15-ft adits, and five pits. Vredenburg (1982) reported 100 tons of unknown type ore produced in 1980 from this or the Max Dor 1 and 2 mine.	One select and nine chip samples. Gold detected in four of seven samples from main vein, 0.010, 0.216, 2.144, and 2.182 oz/ton, and in two of three samples from nearby structures, 0.042 and 0.130 oz/ton. The jasper contains 2.6 oz/ton silver and three samples from the main structure contained 0.5, 3.2, and 9.4 oz/ton silver. Nine samples contained 0.03% to 0.92% and one contained 8.50% lead. Copper in four samples ranged from 0.02% to 0.26%. Erratic but high gold and silver values and persistence of structure indicate that further studies may reveal additional vein-type, gold and silver resources at depth.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
607	Adams-Ikes Hope prospect	0060711799 T10N R15E sec.07	Lower workings are on shear zones oriented N. 50° W., vertical and N. 75° E., SE. in metamorphosed rocks; one is intruded by a vuggy, clear, 8-in.-thick quartz vein containing pyrite, chalcopryite, iron-oxides, and secondary copper minerals. Upper workings are on a N. 10° E. trending skarn lens of pyrite and magnetite with epidote and garnet. The lens is about 50 ft wide and is traceable by float for as much as 200 ft downslope.	One 15-ft shaft and two pits are on quartz and alteration zones; one 20-ft adit and one pit are on the magnetite zone.	Of three chip samples of vein and shear zones, one contained 0.036 oz/ton gold, two contained 0.3 and 2.1 oz/ton silver, copper ranged from 0.03% to 0.18%, and lead ranged from 0.01% to 2.7%. Two samples from the magnetite lens contained 25.7% and 38.4% iron, 6.8% and 3.6% Al <sub>2</sub> O <sub>3</sub> , and 34.3% and 20.5% SiO <sub>2</sub> . One contained 21.8% sulfur. Gold, silver, and lead sample analyses indicate the property merits additional investigation. The magnetite body is indicative of the need for detailed studies of the BC prospect (Map no. 605).
608	Why Not Nos. 1-5 prospect	0060711696 T10N R15E sec.07	At least eight quartz vein segments 0.5 to 4.4 ft thick, most trending northwest, occupy local shears or faults in Jurassic granitic rock. The longest vein is traced for 350 ft and may be up to 900 ft long. Quartz is commonly white, vuggy, and brecciated and contains pyrite, limonite, minor galena, and traces of secondary copper minerals.	Two adits, 8 and 35 ft long, two shafts, 10 and 15 ft deep, three trenches and eight pits.	Of nine chip, one random, and two select samples, seven contained detectable gold and four contained silver. Gold ranged from 0.012 to 0.118 oz/ton and averaged 0.057 oz/ton; three contained from 0.2 to 0.5 oz/ton silver and one contained 1.8 oz/ton silver; lead detected in eleven samples ranged from 0.03% to 0.8% and copper ranged from 0.01% to 0.09% in seven samples. Gold and silver sample analyses and number and type of veins suggest that further exploration is warranted.
609	Max Dor 1 and 2 mine	0060711697 T10N R15E sec.05	Two major structures: an east-trending, north-dipping quartz vein crops out discontinuously for 2,300 ft and a 300-ft spur, and a northwest-trending, northeast-dipping fault exposed for about 350 ft in granitic rocks. The 0.6- to 6.5-ft-thick quartz vein is white to clear and contains pyrite, chalcopryite, malachite, and azurite. The fault is 1 ft thick and composed of green gouge with quartz.	Three small pits, an open pit, four trenches, two dozer cuts, and a 47-ft shaft with 25 ft of crosscuts and drifts. Vredenburg (1982) reported 100 tons of unknown type ore produced in 1980 from this or the Grande 1-7 mine (Map no. 606).	One select and 15 chip samples. Three of 13 samples from quartz veins contained 0.020 to 0.082 oz/ton gold and 3 samples from the fault contained 0.012 to 0.590 oz/ton gold. One sample contained 0.3 oz/ton silver, 10 contained 0.01% to 0.12% copper and 10 contained from 0.01% to 2.38% lead. Based on significant values and prominent structures, this property merits further study for gold with byproduct silver and lead resources at depth.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
610	Gold Star 1-10 prospect	0060711698 T10N R15E sec.08	Localized, north-trending, east-dipping, 0.5- to 7.8-ft-thick quartz veins and shear zones are along a 60- to 400-ft-wide zone of pervasively and intensively altered intrusive rock. This is a south extension of the Gold Star North 1-44 prospect (Map no. 603, herein). The altered zone extends for about 1 mi along a north-northeast trend.	Four inclined shafts, 17 to 55 ft deep, including 55 ft of drifts, two trenches, and six pits.	Of 25 samples, 3 contained a trace to 0.072 oz/ton gold. Five analyzed for copper contained 0.0009% to 0.02% and four of five analyzed for lead ranged from 0.03% to 0.47%. Based on sporadic gold assays and south extension of Gold Star North 1-44 prospect, this property warrants further investigation for gold with byproduct lead and copper resources.
611	Prospect	0060711699 T10N R15E sec.07	A north-trending, 30°-50° W. dipping, 4-in.-to 1-ft-thick quartz vein is exposed for 90 ft in a shear zone cutting metamorphosed igneous rock shear. The shear is composed of punky clay gouge and limonite, and the quartz contains visible galena.	One 90-ft-long adit with at least a 40-ft partially caved crosscut, and one 40-ft trench.	Of four chip samples, two contained 3.2 and 4.3 oz/ton silver and two contained 0.2 and 0.3 oz/ton silver. Lead values ranged from 0.02% to 1.27%. No gold was detected. Silver and lead sample values indicate the prospect merits additional study.
612	Pink Falcon prospect	0060711830 T10N R15E sec.08	Several graphic textured, generally northwest-trending 1- to 3-ft-thick dikes with pink to purple feldspar, abundant white to clear quartz, and minor biotite are exposed for about 20 ft. Some quartz exhibits comb structures with hematitic jasper banding. Hornblende diorite country rock exhibits intense to sericite and chlorite alteration.	Three shafts, 10 to 20 ft deep.	Of one grab and three chip samples, two contained 0.01% and 0.02% copper; no gold, silver, or molybdenum detected.
613	Prospect	0060711831 T10N R15E sec.17	Fault and shear zones strike north to northwest, dip moderately west, and are associated with quartz fillings in granite gneiss country rock. The main zone crops out discontinuously for 320 ft and contains narrow (<6 in.) quartz veins and lenses. Other than minor galena, no significant minerals were observed.	Two inclined shafts, 25 and 70 ft deep, one 30-ft adit, and six pits.	Six chip and one select sample contained no detectable gold or silver. One chip sample with visible galena contained 0.76% lead.
614	Prospect	0060711833 T10N R15E sec.17	Localized shear zones in granite gneiss strike N. 85° W. and dip 33° SW. One contains an aplite dike with abundant chrysocolla staining and the other contains 1- to 3-in.-thick veins with drusy and comb quartz structures. Sinuous cavities in the quartz are filled with bladed barite up to 1 in. long with interstitial galena and chlorite.	Two pits and two small trenches.	Two samples taken: a grab sample contained 2.05% copper and 0.12% barium and a select sample contained 1.0 oz/ton silver, 0.01% copper, 8.8% lead, and 11.8% barium. Silver, lead, copper, and possibly barium sample values indicate the prospect merits further study.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
615	Lou-Al-Mark Nos. 1-3 prospect	0060711832 T10N R15E sec.18	A north-trending, vertical zone of fault gouge 1.3 ft thick with silicified hematite-limonite stringers occurs in granitic country rock. The surface expression along the drainage between pits is about 500 ft.	Two pits.	One chip sample had 0.02% lead; no gold or silver were detected.
616	Silver Duchess prospect	0060711834 T10N R14E sec.18	A 2-ft-thick quartz vein, bordered by fault gouge in granitic rock, strikes N. 17° W. and dips 82° NE. with pyrite and iron oxide in fractures.	Two pits and one collapsed shaft or adit.	One chip and one select sample; no gold or silver detected.
617	Prospect	0060711835 T10N R15E sec.17	An argillized alaskite dike 8 ft thick trends N. 10°-20° W. in pegmatite granite; only locally exposed.	One pit.	One random chip; no gold, silver, or copper detected.
618	Cornfield Springs Consolidated mine	0060710996 T10N R13E sec.11	Pods, lenses, and stringers of massive specular hematite replace quartzite and limestone metasediments of lower Paleozoic age less than 100 ft above a contact with meta-igneous rocks of unknown age. The replacement bodies are generally concordant with bedding which strikes N. 65° E. and dips 35° SE. The iron deposit crops out discontinuously for almost 400 ft, is up to 20 ft thick (up to 230 ft thick at depth), and may have been cut at a depth of 175 ft by workings not now accessible.	One 25-ft inclined shaft, two inclined adits, not accessible (reported to be 65 ft and 635 ft long by Mineral Survey no. 4692), and three pits. One 60-ft-deep shaft is apparently caved (patented claims).	Inferred subeconomic resources of 110,000 long tons contain at least 50% iron. One chip sample contained 26% iron and two random chip samples averaged 50% iron. Contact environment, literature description, and form of deposit suggest that several hundred thousand tons of additional iron resources may be present.
619	Lone Tree prospect	0060711784 T10N R13E sec.11	Two shear zones, about 3 ft thick and oriented N. 25° W., 70° NE. and N. 63° E., 48° SE., intersect in buff, medium-grained, meta-igneous rock. The northeast zone contains some quartz and the northwest zone contains minor malachite.	A 13-ft adit with 16 ft of drift and a 13-ft crosscut (included in a patented claim group, Map no. 618, herein).	A 3-ft chip sample across the intersect contained 0.08% copper; no gold and silver detected.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
620	Kelso Placer prospect north	0060712315 T10N R13E sec.03	Fluvial and alluvial fan deposits consist of poorly sorted gravels and cobbles (40%-60%), sands 40%-50%, and silts or clays (<10%) of predominantly carbonate rock with minor quartzite. Claim activity consists of the Edna in 1905, the Gold Creek group in 1975, and the Kelso Placers in 1979.	None.	Of seven 0.38 ft <sup>3</sup> reconnaissance pan samples, three contained detectable gold. One contained three particles of subangular, flat gold weighing 0.002 mg; two particles were bright and one was dull. One sample contained four particles of bright, subangular to subrounded chunky gold weighing 0.020 mg and a third sample contained 0.068 mg of bright, subrounded gold. Traces of garnet, zircon, and scheelite were noted in some samples; one contained a trace of hematite. Values are estimated at \$0.06/yard <sup>3</sup> , \$0.02/yard <sup>3</sup> , and less than \$0.01/yard <sup>3</sup> at a gold price of \$400/oz.
621	Rex mine	0060710173 T10N R13E sec.09	A N. 25° W. trending, steeply southwest dipping fault cuts Jurassic age, metamorphosed granitic and subvolcanic rocks. Several, localized, north-trending shear zones are also present. The fault is exposed for 170 ft and contains a brecciated, pinch and swell, quartz vein exposed for 140 ft and averaging 2.5 ft thick. Gold is restricted to the quartz vein. The fault zone is largely composed of earthy to specular hematite and is inferred to be a northern extension of the Hidden Hill fault which partly controls the Vulcan mine-Burro prospect (Map no. 629, herein).	The main working consists of 182 ft of drifts and crosscuts, two portals, two connecting 20 ft deep shafts, and possible inaccessible lower levels. Other workings include a 10-ft-deep shaft, three trenches, and four pits. Cumulative production (USBM statistical files) for 1939 and 1951 was 126 crude tons containing 17 oz gold and 9 oz silver; small shipments reported (Wright and others, 1953) for 1934 and 1948.	The exposed vein deposit is estimated to contain an occurrence of 3,700 tons at an average grade of 0.22 oz/ton gold. Of 16 chip and 3 select samples, 9 contained detectable gold and three contained detectable silver. Gold ranged from 0.016 to 0.564 oz/ton, with 4 samples exceeding 0.1 oz/ton, and silver ranged from 0.006 to 0.7 oz/ton. None of the gold-bearing samples contained detectable silver. Less than 0.01% each of copper, lead, and zinc were detected in two samples analyzed. The major fault control, size of the mineralized structure, and the sample analyses suggest that additional vein-type gold resources may be present at depth.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
622	Kelso placer prospect, south	0060712316 T10N R13E sec.15	Fluvial sediments are predominantly limestone in composition. Material is poorly sorted, consisting generally of 60% cobbles and gravel and 40% sand. Claim activity consists of the Saturn, Uranus, and Milky Way Claims in 1950, the Providence Placer Group in 1973, and the Kelso Placers in 1979.	None.	Of four 0.38 ft <sup>3</sup> reconnaissance pan samples, three contained gold. One contained a dull, chunky, subangular to subrounded particle of gold with a weight of 0.001 mg; one sample contained three bright to tarnished, subangular, chunky flakes of gold with a weight of 0.006 mg; and one sample contained 0.006 mg of bright, subangular gold. Two samples contained traces of zircon and scheelite. Sediment values are estimated to be less than \$0.01/yard <sup>3</sup> at a gold value of \$400/oz.
623	Dolomite outcrop	0060711839 T10N R14E sec.05	A north-northeast-trending ridge is 2,000 ft long and 1,000 ft wide at its base, and is part of the lower dolomite member of the Middle Cambrian Bonanza King Formation (Hazzard, 1954).	None.	Eight random chip samples: MgO ranged from 5.4% to 21.4%. Exclusive of one low sample, the occurrence averages 19.1% MgO; however, several samples contained high SiO <sub>2</sub> and Fe <sub>2</sub> O <sub>3</sub> . The deposit is considered an occurrence with an inferred size of 12 million tons. The areal extent of this and other dolomite units in the Paleozoic assemblage in the Providence Mountains is very large.
624	Bonanza 1-8 placer prospects	0060712313 T10N R13E sec.21	Fluvial sediments consist of poorly sorted sand and pea gravel (70%-80%) with minor cobbles and fines; composition varies from predominantly syenite to limestone with some rhyolite. Heavy black sands and magnetic fraction are due to the Vulcan mine-Burro prospect (Map no. 629, herein). The Bonanza placers were located in 1979.	None.	Of five 0.38 ft <sup>3</sup> reconnaissance pan samples, two contained two dull, chunky, subangular to subrounded gold flakes, each with weights of 0.003 and 0.004 mg. Traces of garnet, zircon, scheelite, and hematite were also observed. Sediment values are estimated to be less than \$0.01/yard <sup>3</sup> at a gold price of \$400/oz.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
625	Iron Mountain prospect	0060711785 T10N R13E sec.23	Northeast-trending, brecciated shear zones occur in interbedded shale and limestone. A skarn-type mineral assemblage consists of magnetite, specular hematite, garnet, epidote, pyrite, chalcopryite, secondary copper minerals, and quartz. The zones are localized, partially controlled by bedding, and occur very low in the Paleozoic assemblage, close to Jurassic intrusive rocks.	Two adits, 10 and 37 ft long.	Of four chip and select samples, two contained 0.4% and 3.2% copper. No gold, silver, lead, or zinc detected.
626	Prospect	0060711786 T10N R13E sec.24	Fault gouge, 1 to 5 ft thick, is exposed along the length of an adit on a north-northeast-trending contact between limestone and rhyolite. The sheared to brecciated rocks are iron-oxide stained and contain malachite and chrysocolla.	One adit at least 150 ft long, and three pits.	Of four samples in the adit, one contained 0.016 oz/ton gold and two contained 0.2 and 0.4 oz/ton silver. A select sample from a stockpile contained 5.2 oz/ton silver and 0.74% copper. A grab sample contained 1.0 oz/ton silver and 0.23% copper. Contact environment and gold, silver, and copper values indicate the prospect merits additional study.
627	Rector Not prospect	0060711787 T10N R14E sec.30	A fault strikes N. 30° W. and dips 55° NE. in limestone near a contact between silicified malachite-, chalcopryite-, and galena-bearing limestone and iron-oxide stained rhyolite.	One adit, 30 ft long, two open cuts, 100 ft long, and one dump (no portal found).	Of two select samples, one contained 0.014 oz/ton gold and both contained silver, 0.2 and 0.6 oz/ton. One sample contained 9.4% copper, 0.07% lead, and 0.01% zinc. Gold and copper analytical values and similar types of minerals and alteration along the extent of the fault contact in the Foshay Pass area indicate the property merits additional investigation.
628	Dolomite outcrop	0060711365 T10N R13E sec.25	Light to dark gray, subcrystalline dolomite occurs in the Cornfield Springs Formation. The unit strikes northeast and dips 30°-40° SE. Hazzard (1954) described dolomitic formations cropping out for about 7 mi along strike as follows: 1) Middle Cambrian Bonanza King Formation (1,875 - 2,230 ft thick); 2) lower part of the Late Cambrian Cornfield Spring Formation (650 ft thick); and 3) the Ironside Dolomite Member of the Middle Devonian Sultan Limestone (50-75 ft thick).	None.	Two grab samples of dolomite contained 19.3%-19.5% MgO, 0.23%-0.28% Fe <sub>2</sub> O <sub>3</sub> , 0.46%-0.51% Al <sub>2</sub> O <sub>3</sub> , and 0.012%-0.022% SiO <sub>2</sub> . Sample analyses suggest this dolomite is suitable for at least intermediate-grade industrial applications; it will probably not be of economic significance until the depletion of dolomite resources closer to metropolitan markets.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
629	Vulcan mine-Burro prospect	0060710226 T11N R13E sec.36	A magnesium silicate skarn-type iron deposit is along a northwest-trending fault contact between Paleozoic dolomitic carbonate rocks on the north and quartz monzonite on the south. The main ore body was 700 ft long, 325 ft wide, and composed of magnetite, subordinate specular and earthy hematite, and minor limonite and pyrite. Serpentine is the major gangue mineral. A smaller deposit occurs east of the mine.	The main open pit is 1,000 ft long by 500 ft wide by 100 to 250 ft deep. Other workings are a smaller open pit, a north-trending adit, and numerous pits, trenches, and drill roads. Property consists of five patented mining claims, a patented millsite and 12 unpatented claims. Wright and others (1953) show production of 2.643 million long tons of 50% iron from 1942 to 1947. Minor production from dumps and stockpiles in the 1950's (patented claims).	Permission to enter the property was denied by Kaiser Steel. Based on published data (Lamey, 1948), the deposit is estimated to contain 3.0 million long tons of inferred, subeconomic resources averaging 50% iron. Aeromagnetic surveys and a fault contact suggest that additional resources may be present to the east.
630	Copper King-Queen of the Night pros	0060711788 T10N R14E sec.30	A fault zone about 4 ft thick strikes N. 5°-20° W. and dips 65° NE. in light gray, iron-oxide stained limestone. The 80-ft-long exposure is subparallel with and less than 100 ft from a contact with rhyolite. The fault zone is probably several hundred feet long. The limestone is silicified and contains blebs of malachite and azurite and veinlets of calcite. Microprobe examination showed fine-grained inclusions of cinnabar and iodyrite (AgI) in the malachite.	One shaft 20 ft deep, one adit 6 ft long, and three bulldozer cuts, each about 100 ft long.	Two chip samples contained 0.15% and 0.48% copper; no gold or silver was detected.
631	Tip Top prospect	0060711789 T10N R14E sec.29	Fault zones are 1.0 to 3.5 ft thick and strike N. 45° W. to N. 10° E. and dip 80° NE. to 85° NW. in fractured, gray, iron-oxide stained limestone south of a rhyolite contact. Rocks contain minor to abundant malachite with chalcocopyrite and possible bornite.	Three shafts, 20 to 70 ft deep, and two adits, 8 and 10 ft long.	Of two chip, two select and one grab sample, two contained silver, 0.4 and 0.6 oz/ton; no gold detected. The chip samples contained 0.08% and 0.84% copper, the grab sample contained 1.72% copper and the select samples contained 13.3% and 25% copper. The high-grade copper, the presence of silver, and the proximity to the rhyolite contact indicate further study is warranted.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
632	Burro No. 31 prospect	0060711790 T10N R14E sec.32	Northwest-trending, vertical to northeast dipping fault zones 1.0 to 7.0 ft thick are in limestone. Two short (<50 ft) fault zones are silicified and contain quartz, calcite, iron and manganese oxides, malachite, possibly smithsonite, minor magnetite, and chalcopryrite. A 20 ft wide, prominent, fault-bound zone is internally sheared, faulted, bleached, and has localized silicification and iron-oxide staining. Fault-bound talcose zones are also contained in the main fault zone.	Two adits (68 and 250 ft long) and one pit.	Of nine chip samples, one contained a trace gold and six contained 0.1 to 0.2 oz/ton silver. Eight samples analyzed for copper, lead, and zinc contained minor to moderate values (<1%) except for one which contained 2.70% copper. The fault control, rhyolite contact, and gold and copper sample analyses indicate the property merits additional study.
633	East Burro prospect	0060711793 T10N R14E sec.32	Three workings explore a very irregular, northeast-trending contact zone between silicified rhyolite on the north and a weathered, granitic intrusion on the south. The zone is intensely bleached, contains fragments of limestone, and exhibits chloritic alteration. The remainder of workings are in weathered, friable to sheared granitic rock without apparent structure.	Eight bulldozer cuts, each about 50 ft long.	Two grab samples contained 0.0011% to 0.057% copper; one contained 0.08 oz/ton silver.
634	Burro 54 and 55 prospect	0060712312 T10N R14E sec.28	A deeply weathered, intensely iron-oxide altered granitic intrusion lies near a contact with a rhyolite intrusion.	One bulldozer cut 110 ft long.	One grab sample contained 0.0022% copper; no gold or silver detected.
635	Sunrise prospect	0060711791 T10N R14E sec.32	Localized, 2- to 3-ft-thick shear zones are in limestone about 1/2 mi south of a contact with a rhyolite plug. One zone strikes north, dips 78° E., and contains subequal amounts of quartz and carbonate veining with minor iron-oxide, magnetite, and traces of malachite and chalcopryrite. Another fault trends northwest, dips steeply southwest, and contains iron- and manganese-oxides in fractures, and minor encrusted malachite.	One adit, 60 ft long, one caved adit, about 30 ft long, and one shaft of unknown depth.	One select sample contained 0.062 oz/ton gold, 18.3% copper, and 0.01% lead. One chip sample contained 0.2 oz/ton silver, 0.125% copper, 0.0045% lead, and 0.25% zinc. Gold and copper analytical values and the proximity to the rhyolite plug indicate that further study is warranted.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
636	Prospect	0060711792 T10N R14E sec.32	North- to northwest-trending, southwest dipping shear zones 4 to 70 ft thick are locally exposed in and near a contact zone between Paleozoic carbonates and a Jurassic granitic intrusion. One zone contained a 1.6-ft-thick magnetite vein of unknown length; the hanging wall is limestone and the footwall is intrusive rock.	Two bulldozer cuts, each 100 ft, and one pit.	Of two chip samples across shear zones, one contained 0.1 oz/ton silver; copper values were <0.002% and zinc values were <0.007%. A chip sample across the magnetite contained 61.1% Fe <sub>2</sub> O <sub>3</sub> , 14.7% SiO <sub>2</sub> , 10.9% MgO, 6.2% CaO, 1.6% MnO, 1.3% Al <sub>2</sub> O <sub>3</sub> , 0.15% P <sub>2</sub> O <sub>5</sub> , and 0.12% sulfur. Small but high-grade outcrops of magnetite along the contact zone up to 1 1/4 mi east of the Vulcan mine-Burro prospect (Map no. 629) are consistent with the geologic environment attributed to that mine. Further exploration is warranted.
637	Foshay Pass Barite	0060710571 T10N R14E sec.32	Two small fractures cut syenite with occasional clay alteration and a trace of iron oxide staining. Fractures are each filled with 1/2 in. of clay; they strike N. 10° E. and dip vertically. Two veins of barite are reported in this vicinity.	No workings.	One chip sample across clay gouge zones contained no significant values.
638	Due group	0060712318 T10N R14E sec.33	Claim area is covered by multiple alluvial fans.	One pit.	One pan sample; contained no detectable gold.
639	Petrified wood outcrop	0060711798 T11N R14E sec.27	Agatized Sequoia landsdorffia occurs as float and at the base of volcanic ash beds near Barber Canyon and at the mouth of Beecher Canyon. It occurs as non-fractured rubble up to 6 in. diameter and ranges from light tan to nearly black with a distinct wood grain pattern visible in cut specimens.	One small cut in ash beds east of Whiskey Spring.	About 2 to 3 yd <sup>3</sup> of petrified wood float (classed as excellent for jewelry) was observed in Barber Canyon. The price is estimated at \$0.10 to \$0.25/lb wholesale delivered or \$1.00/lb retail for the raw product. Quantities and quality appear to be suitable for recreational use but would not support a long-term commercial operation.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
640	Adams - Anna Ore	0060712319 T09N R14E sec.03	Quartz veins, as thick as 18 in., striking N. 70° W. with vertical dips, generally cut an orange, bleached, and silicified limestone and quartz monzonite dikes. Vein quartz is colorless to white and contains trace of pyrite, limonite after pyrite, and chrysocolla. The limestone is intruded by quartz monzonite; both places are altered to clay with some sericite and silicified. Both rock types are cut by pre- and post-mineralization faults, fractures, shears, and breccia zones.	Six trenches, 6 shafts (as deep as 100 ft) and one 75-ft-long adit.	Prospect may have skarn, vein, and disseminated gold-silver-copper resources. Twenty-seven chip samples and one grab sample collected. Five vein chip sample contained trace to 0.23 oz/ton gold, and 0.071 to 1.4% copper; trace to 1.7 oz/ton silver; 3 had 0.10 to 1.8% lead, 3 had 0.1 to 1.8% zinc. Four host-rock samples had 0.1 to 0.61% lead, and 2 samples had 0.1 to 0.4% zinc. All remaining chip and grab samples contained lower, but anomalous metal values: 21 to 820 ppm lead, 20 to 750 ppm zinc, 2 to 900 ppm copper. In 22 samples molybdenum content ranged from 2 to 64 ppm.
641	Sample	0060712320 T09N R14E sec.09	North- to northeast-trending, steeply dipping shear zones as thick as 24 in. cut quartz monzonite and two west-trending syenite dikes. Both rock types show slight argillic alteration, are locally bleached and silicified, have limonite on fractures, and some iron-oxide stain. In quartz monzonite, blotches of chlorite are locally replaced by pyrite, chalcopyrite, or malachite. Specularite is also present on some fractures. Malachite-stained clay gouge zones are as thick as 1.5 ft with inclusions.	Two small pits and an 86-ft-long adit.	Three chip and 3 dump grab samples were collected. The grab samples contained trace to 0.01 oz/ton gold and trace silver; 2 grab samples contained 0.4 and 0.59% copper. Other anomalous values were reported: zinc values in the 6 samples ranged from 46 to 85 ppm; fluorine content ranged from 0.024 to 0.50%. Three grab samples contained 39 to 44 ppm molybdenum and 92 to 250 ppm copper.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
642	Unknown	0060712321 T09N R14E sec.09	Quartz veins and multiple shears cut mixed andesite and quartz monzonite. Veins of colorless quartz trend N. 30° W. to N. 20° E., and dip 30° to 70° E. White quartz veins trend east and dip steeply north and south. Both vein types show comb structure. Minor amounts of malachite, azurite, chrysocolla, limonite and manganese oxides occur in clear quartz veins. Shear and gouge zones are 1- to 14-in. thick, trend N. 10° to 75° E., and dip 65° to 85° SE. Host rocks are bleached and silicified near veins and have a selvage of clay alteration. Some limonite and iron-oxide stain occurs locally.	Three cuts, one caved adit, a 20-ft-long and a 50-ft-long adit.	Seventeen samples were collected. Two grab samples of dump material contained trace and 0.03 oz/ton gold, 0.25 and 1 oz/ton silver, 0.82 and 1.6% copper and 0.075 and 0.934% fluorine. Of the 15 chip samples three were from veins and 5 from fault gouge zones. Metal values in these 8 samples ranged from trace to 0.14 oz/ton gold and trace silver; 3 contain 0.06 to 1.3% copper; 1 contained 0.23% lead, and 7 contained 0.1 to 0.17% fluorine. Of the remaining 7 chip samples of syenite host, all 7 contained trace gold and silver, one contained 0.2% lead; and 7 contained 0.011 to 0.074% fluorine. Other anomalous metal values were reported in vein and gouge samples: 200 and 400 ppm zinc in two samples and 200 to 950 ppm lead in 6 others.
643	Goldstone Group	0060711000 T09N R14E sec.06	Veins of milky to colorless quartz, 2 in. to 8 in. thick, are in syenite and quartz monzonite. Bleaching due to argillic alteration is common near veins. Smaller quartz veinlets parallel main veins on either side. Veins contain various amounts of pyrite, chalcopryrite, specularite, malachite, azurite and limonite. Host rocks are cut locally by north-trending shear zones, as wide as 3 in., and by epidote and chlorite veinlets. Silicification is common.	One bulldozer cut, 3 pits, a 25-ft-and a 35-ft-deep shaft, a caved decline, and two caved adits.	The prospect may have gold-silver-copper vein-type resources. Three chip and eight grab samples were collected. Two chip samples of syenite contained a trace of both gold and silver; a vein chip sample contained 0.13 to 0.09% fluorine. Other anomalous metal values were reported: two chip and six grab samples contained 0.03 to 0.09% fluorine. Other anomalous metal values were reported: two chip and six grab samples contained 8 to 300 ppm lead; three chip and six grab samples contained 10 to 130 ppm zinc. Copper values in three chip and three grab samples ranged from 14 to 295 ppm. All samples contained molybdenum which ranged from 3 to 24 ppm. One grab sample contained 11 ppm tungsten.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
644	Crystal	0060712311 T09N R13E sec.01	A lenticular, colorless to milky quartz vein averaging 6-in. thick cuts brown monzonite. The vein contains specularite, minor epidote, minor pyrite, and small clasts of host rock; it strikes N. 74° W., and dips vertically. Near the shaft, country rock is an unaltered, medium-grained quartz monzonite cut by aplite dikes.	One cut, 3 pits, and a 15-ft-deep shaft.	Three grab samples from the 40-ton dump averaged about 0.2 oz/ton gold. Of 3 chip samples, 2 contained traces of gold and silver. Grab samples of stockpiles contained trace to 0.22 oz/ton gold and trace to 0.43 oz/ton silver; 1 contained 26 ppm copper. Two grab and 2 chip samples contained 25 to 47 ppm zinc and 7 to 63 ppm molybdenum.
645	Texas	0060712309 T09N R13E sec.01	Colorless and milky quartz veins with traces of pyrite and marcasite cut andesite and rhyolite. The andesite is also cut by a north-trending 6-in.- to 5-ft-thick shear zone, and a 6- to 10-ft-thick rhyolite dike. The andesite is locally bleached and silicified but generally chloritic and altered to clay; dike is pale orange, bleached, and silicified. Some limonite is present. A second north-trending shear zone, which cuts the andesite and rhyolite, is 2- to 4-ft thick and generally parallels west side of dike.	One 150-ft-long adit.	Ten chip and 4 grab samples collected. Eight chip and 3 grab samples contained traces of gold. Thirteen samples had 7 to 250 ppm zinc; 2 had 195 to 240 ppm lead; 5 had 12 to 50 ppm copper; and 13 had 14 to 140 ppm molybdenum.
646	Center	0060712310 T09N R13E sec.01	Colorless and milky quartz, epidote, and specularite veinlets cut medium- to fine-grained quartz monzonite, which has numerous fractures and displays clay and quartz alteration. Veinlets contain malachite, pyrite, trace of chalcopryrite, and dark-gray quartz bands.	One pit.	Two chip samples and one grab sample collected; all contained trace to 0.015 oz/ton gold, traces of silver, and 0.12 to 0.80% copper. One chip sample contained 39 ppm zinc; all three contained 8 to 24 ppm molybdenum.
647	Blue Danube	0060712308 T09N R13E sec.02	Granite with three gouge zones and a breccia zone. Granite with chlorite and clay alteration contains orange clay gouge zones and a breccia zone 6-in. to 1-ft thick, exposed in the adit 105 ft from portal. Breccia strikes N. 31° W. and dips 85° W.	One adit 155-ft long.	Four chip samples across gouge and breccia zones contained traces of gold and silver. They also contained 46 to 210 ppm zinc and 0.064 to 0.18% fluorine. One sample contained anomalous copper (14 ppm) and molybdenum (6 ppm).
648	Pennsylvania	0060712307 T09N R13E sec.02	Syenite with weak chlorite and clay alteration is cut by veinlets of calcite, chlorite, and epidote. No visible vein. Quartz on dump contains malachite, chrysocolla, pyrite, sphalerite, chalcopryrite and a trace of visible gold. Quartz is colorless, forms comb structures, and contains sulfide minerals at contact with host rock.	One 20-ft-long open cut and one caved decline.	Dump contains about 50 tons of rock. A select sample of quartz from the dump contained 0.85 oz/ton gold, 0.56 oz/ton silver, and 2.9% copper. One chip sample of syenite contained 120 ppm zinc, 110 ppm copper, and 40 ppm molybdenum; dump sample contained 130 ppm zinc and 49 ppm

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
649	Unknown	0060712306 T09N R13E sec.02	Milky quartz veins, colorless quartz veinlets, gouge-filled shear zones, pegmatite and andesite dikes, and quartz monzonite cut orange rhyolite. Veins trend N. 20° W., dip 21° to 80° SW., are 2- to 6-in. thick, contain specularite, and pyrite in center and along edge. Some show post-mineral faulting. Rhyolite is fractured and silicified and has local sericite. Limonite is present on most fractures.	Three pits and 2 adits (one caved); open adit is 78-ft long.	molybdenum. Prospect area may have a vein and a disseminated gold resource. Eight chip samples and one grab sample collected from quartz veins, gouge zones, and rhyolitic host rock. Eight samples contained gold values from trace to 0.77 oz/ton. All 9 samples contained 10 to 210 ppm lead, 10 to 37 ppm zinc, and 19 to 21 ppm copper. Five samples contained 6 to 9 ppm molybdenum.
650	Iron King	0060712305 T09N R13E sec.11	A 10- to 20-ft-wide zone of magnetite-rich, sheared syenite and a 2- to 6-ft-thick magnetite vein trending N. 30° E. cut a medium-gray mafic-rich syenite. Syenite is locally silicified, is altered to clay, epidote, and chlorite, and is intruded by a 4-ft-thick quartz monzonite dike. Pit exposes a zone of silicified quartz monzonite. Limonite occurs on fractures.	One 200-ft-long bulldozer cut, a 4-ft-deep pit and a 55-ft-long adit.	Prospect may have iron resources. Six chip and one grab sample collected. All seven samples contained 2.7 to 81% iron and 0.08 to 0.51% titanium dioxide. Five chip samples and one grab sample contained 22 to 53 ppm lead, 15 to 135 ppm zinc, and 14 to 195 ppm copper. Two chip samples contained 2 and 6 ppm molybdenum. A single chip sample was analyzed for silicon dioxide (8.3%), chromium (43 ppm), and vanadium (320 ppm).
651	Crucero group	0060712170 T09N R13E sec.04	Are is covered by multiple alluvial fans cut by numerous arroyos.	No workings.	Eight pan samples collected from active part of eight major arroyos. Five samples contained no detectable gold; three samples contained 1.5 to 3.4 cents/cu yd. (Gold value calculated at \$400/oz.)

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
652	Kelso Dunes (J&P Project) Mineral Extractors, Inc.	0060712787 T09N R12E sec.09	Active sand dunes cover an area about 6 mi by 9 mi and reach a height of 500 ft above the surrounding valley floor. The sand consists mainly of quartz and feldspar with smaller amounts of magnetite, ilmenite, and gold.	A plant to strip about 1,200 tons/day of sand and separate the magnetic fraction is at the southern margin of the dune field. A 1990 plan calls for shipment of magnetic concentrates to Twentynine Palms, CA for recovery of precious and platinum group metals (Davy McKee, 1990, p. 1). About 1,000 tons of magnetite were produced in the 1970's during pilot plant testing (Munts, 1983, p. 10). An application for patent to the property was being considered in 1990.	The primary dune field contains about 16 billion tons of sand that 86 samples suggest would average about 80% quartz, 15% feldspar, 1% to 4% magnetite, 0.35% ilmenite, and 0.045 ppm gold (but locally as much as 17 ppm gold). This constitutes a marginal reserve of glass sand with by-product gold and magnetite (Yeend and others, 1984, p. 17). One test sample contained 71.8% SiO <sub>2</sub> , 14.1% Al <sub>2</sub> O <sub>3</sub> , and 2.7% Fe <sub>2</sub> O <sub>3</sub> . Raw material is unsuitable for glass sand; upgrading by available technology may make mining feasible.
653	Buena Suerte	0060712297 T09N R12E sec.20	A rhyolite dike, overlain by gneiss and underlain by schistose metasediments, strikes N. 80° W and dips 37° NE. The dike is about 50 ft thick and exposed for at least 5,500 ft.	None.	One 1990 USBM sample (CEM-1) contained no economically significant mineral concentrations.
654	Unknown	0060711800 T09N R11E sec.25	Milky quartz vein, 1 ft thick and 100 ft long, in granodiorite.	One 12- by 10-ft pit.	One sample--no significant values (Sabine, 1984, p. 25, No. 1)
655	Comanche mine	0060711801 T09N R12E sec.26	Wedge-shaped pod of chalcopryrite-bearing magnetite 20 ft long, 3 ft thick, and 19 ft wide, replaced marble along the footwall of a fault in the upper adit. The pod originally contained about 110 tons, of which about 10 remain. Interstitial malachite and azurite occur in a zone of fault breccia 40 ft long and 2 ft thick. Less than 50 tons of mineralized breccia remain. The deposit is in a 400-ft-long roof pendant of marble in diorite and quartz monzonite (see Sabine, 1984, p. 12).	Two adits, one pit. Upper adit: 70 ft of drift, one stope open to surface, winze to lower level. Lower cross-cut adit: 205 ft long, no mineralized structures. In 1958, 20 tons of ore were mined that yielded silver and copper.	Two chip samples (see Sabine, 1984, p. 14) of magnetite contained 42.5% iron; a grab sample from the loading bin contained 10.7% iron, 0.86% copper, and 0.38 oz/ton silver. Four chip samples across the fault breccia averaged 2.5% copper (range 0.05-5.0%) and 0.3 oz/ton silver (range 0.21-0.68 oz/ton). Two chip samples of marble contained 40.8% and 44.8% CaO, and 15.6% and 13.8% MgO, respectively.
656	Unnamed prospect	0060711802 T09N R12E sec.26	Green malachite stain on diorite at the portal. No other mineralized structures.	One adit, 104 ft long.	Three samples--no significant values (Sabine, 1984, p. 25, No. 3).
657	Golden Legend	0060711803 T09N R13E sec.31	Milky quartz veins, as thick as 7 ft and as long as 40 ft, in quartz monzonite.	One pit.	Three samples--no significant values (Sabine, 1984, p. 25).
658	Unknown	0060712169 T09N R13E sec.17	Area is covered by multiple alluvial fans cut by arroyos.	One 6 ft by 8 ft by 4 ft deep pit.	One 4 in. by 4 in. vertical channel sample 4 ft long in pit face; contained no detectable gold.



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
659	Green Beauty	0060712302 T09N R13E sec.15	Gravel bars 1 in. to 6 ft thick, 4 to 6 ft wide and 25 ft long in active arroyo.	No workings.	One 4 in. by 4 in. by 4 ft long vertical channel sample of bar gravel; contained 0.2 cents/yd <sup>3</sup> . (Gold value calculated at \$400/oz).
660	Sunview	0060712301 T09N R13E sec.22	unaltered granite.	One 50-ft-long bulldozer cut.	One chip sample of granite contained 13 ppm lead, 34 ppm zinc, and 15 ppm copper
661	Virginia group	0060712300 T09N R13E sec.27	Area is covered by multiple alluvial fans cut by arroyos.	No workings.	One pan sample from bed of active arroyo containing visible black sand; contained no detectable gold.
662	Edith group	0060712299 T09N R13E sec.27	Area is covered by multiple alluvial fans cut by arroyos.	No workings.	One pan sample from bed of active arroyo; contained no detectable gold.
663	Philadelphia Fluorspar	0060710049 T09N R13E sec.23	Quartz monzonite, locally silicified, bleached and sericitized, cut by a 12- to 14-in.-thick vein of green and purple fluorite which strikes N. 33° E. and dips 75° NW. Vein is brecciated on east side.	One 8-ft-deep shaft and 500 ft of bulldozer cuts on four levels.	The property may have fluorspar resources. Five chip samples contained 23% to 30% fluorine. All samples contained lead (29 to 38 ppm), zinc (13 to 30 ppm), and copper (5 to 15 ppm).
664	Midnight Group	0060712303 T09N R13E sec.26	Quartz monzonite cut by diorite and lamprophyre dikes; locally silicified and limonitic.	One pit.	Two grab samples of quartz monzonite contained 24 and 35 ppm zinc, 12 and 125 ppm copper, and 6 and 120 ppm molybdenum.
665	Lauri	0060711940 T09N R13E sec.13	Quartz veins in syenite. Veins trend N. 12° W., dip 70° to 80° W., are as thick as 4 in., are fractured, and contain traces of pyrite. Syenite is cut by numerous fractures and northerly trending faults, is silicified and bleached within 10 to 50 ft of veins, and contains traces of sericite and limonite.	Five trenches, 3 pits, and 3 shafts 20-ft, 30-ft, and 35-ft deep.	Seven chip and six grab samples. Five chip samples (including all vein samples) contained trace to 0.30 oz/ton gold; all samples contained trace to 1.2 oz/ton silver, and three samples contained 0.28% to 7.3% copper. Other anomalous metal values were reported: all samples contained 9 to 43 ppm lead and 13 to 83 ppm zinc. Ten samples contained 63 to 620 ppm copper, and 12 samples contained 4 to 20 ppm molybdenum. Only one sample contained tin (8 ppm) and two contained tungsten (11 and 16 ppm).

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
666	Hayman	0060712323 T09N R14E sec.18	A quartz vein occurs in syenite near the east side of a N. 20° E.-trending dacite dike. The vein averages about 1-ft thick. Smaller (1-3-in.-thick) parallel veins occur nearby. Dacite is clay altered and locally silicified. Syenite is silicified and contains specularite in places near the dike.	One pit.	Two chip samples; one of the dike and one of the quartz vein; the latter contained trace silver and 0.6% copper.
667	Warm Springs Gold	0060712322 T09N R14E sec.17	Veins trending N. 30°-55° E. and dipping 70°-90° E. and W. and northeast-trending shears as thick as 6 in. cut weathered syenite. Veins contain white to colorless quartz, are as much as 16-in. thick, display comb structure locally, and contain pyrite, chalcopryite, malachite, azurite, limonite, and specularite. Chlorite occurs as discrete veinlets, adjacent to quartz veins generally along the footwall contact, or as a cavity filling in quartz-vein comb structure. Syenite is altered to clay and in places bleached and silicified near veins. Some sericite and iron oxide stain and limonite are also present.	Two cuts, a 30-ft-deep decline, and a 200-ft-long northwest-trending adit.	Fourteen chip samples and 1 grab sample; grab sample of dump contained 0.27 oz/ton gold and 1 oz/ton silver, 0.67% copper, and 0.04% fluorine. Nine chip samples collected from thin sulfide-rich veins contained trace to 0.65 oz/ton gold and trace to 1.75 oz/ton silver. Three samples contained 0.1 to 7% copper, and 0.029 to 0.14% fluorine. Other anomalous values were reported: all 5 host-rock chip samples contained trace gold and silver; 7 chip samples contained 100 to 500 ppm copper and 300 to 1,500 ppm fluorine.
668	Pilot mine	0060711881 T09N R14E sec.16	Colorless to white quartz vein, as thick as 6 in., intrudes quartz monzonite. The vein is lenticular and grades into a narrow (1-3 in.) gouge zone on both ends beyond the mine workings. The vein strikes N. 10° E. and dips vertically. Quartz monzonite is bleached, contains limonite, and is altered to clay, quartz, and sericite.	One 45-ft-deep shaft. Reported production from 1911-1935 is 105 tons of ore containing 86.97 oz gold, 840 oz silver, 2,199 lb lead, and 19,667 lb copper.	Mine may have vein-type gold-silver-lead-copper resources. Three samples collected. No significant metal values detected.
669	Providence Mine	0060710997 T09N R14E sec.16	A north-trending 4-in.-thick shear and gouge zone offset by a 6-in. west-trending milky quartz vein is exposed at the collar of a shaft. Veins are lenticular. Host rock is orange, iron stained syenite with feldspars altered to clay.	Three shafts; a two-compartment shaft is reported to be 150-ft deep. Reported production in 1918 was 12 tons of ore containing 455 oz of silver, 2,456 lb of lead, and 166 lb of copper.	Mine may have vein-type, silver-lead copper resources. Four samples: the dump sample contained trace silver, 0.18% copper, and 0.24% fluorine. A chip sample of the shear zone contained 0.13% fluorine. The quartz vein contained trace gold and silver and 0.13% fluorine.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
670	Unknown	0060710999 T09N R14E sec.21	Pegmatite, mafic dikes, colorless quartz, and epidote veinlets intruded quartz monzonite and biotite quartz monzonite. Host rock contains a trace of pyrite, minor malachite, and chrysocolla.	Two pits, one 6-ft-long cut, and one 15-ft-deep shaft.	Four samples: 3 grab samples contained traces of silver, zinc, and niobium and 0.014% to 0.15% fluorine; one contained 1.8% copper. A 5-ft chip sample of the pit face contained 0.27% fluorine and 0.095% niobium.
671	Midas Touch	0060712325 T09N R14E sec.20	Veins (as thick as 14 in.) of colorless and milky quartz cut biotite quartz monzonite and often parallel dikes. Colorless quartz veins contain pyrite, arsenopyrite, marcasite, disseminated specularite, malachite, chrysocolla, limonite after pyrite, and a trace of selenite. Some quartz veins are blue black and brecciated, with transparent blue and white quartz cement. Calcite veins also are present. The biotite quartz monzonite is intruded by northwest- and northeast-trending quartz monzonite and andesite dikes, is propylitically altered, and is locally bleached and iron-oxide stained; no limonite present.	Eleven pits, 7 shafts as much as 100-ft deep, and one 25-ft-long decline.	Dump contains about 200 tons of rock averaging 0.08 oz/ton gold. Twelve chip and 6 grab samples were collected. Two quartz-vein chip samples contained trace and 0.01 oz/ton gold and traces of silver. Of the 12 grab samples: 4 dump-rock samples contained trace to 0.2 oz/ton gold and traces of silver; 4 host rock samples contained trace to 0.15 oz/ton gold and traces of silver; copper values of 3 samples ranged from 0.1% to 0.25%; 3 of 4 samples of small stockpiles contained trace to 1 oz/ton gold and trace silver; one sample contained 0.05% fluorine.
672	Echo	0060712324 T09N R14E sec.19	Quartz, epidote, and magnetite veinlets cut syenite, and andesite, quartz monzonite, and diorite dikes. Colorless and milky quartz veinlets are as thick as 3 in. and trend N. 10° E. Syenite is unaltered; quartz monzonite and andesite are silicified. Diorite has chlorite, tourmaline, epidote, and clay alteration. A limonitic fracture zone, 12-ft-thick, strikes N. 48° E. and dips 80° SE.	Two pits, a 70-ft-long trench, and one 50-ft-deep shaft.	This prospect may have vein-type gold-bearing resources. Four samples: two grab samples of quartz from dumps contained 0.12 and 0.15 oz/ton gold and traces of silver, zinc, and copper; one had 0.16% copper. A 10-ft-thick limonitic fracture zone contained 0.35 oz/ton gold and trace silver.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
673	Buena Vista mine	0060712327 T09N R14E sec.20	A quartz vein occurs along the footwall of a fault-controlled, silicified andesite dike in syenite. The vein is 6-in. to 6-ft thick, colorless to white, and is either massive or a multitude of veinlets. Limonite and local areas of bleached host rock are associated with the vein. It trends N. 26° E., dips 56° NW. and is paralleled on the footwall by a shear and breccia zone 6-in. thick. Pyrite, chalcopyrite, and malachite occur in trace amounts in the vein; fluorite occurs both in the vein and nearby host rock. The syenite with intense silicification has clay alteration and some sericite near dike and vein.	One pit, a caved decline, a partially caved 150-ft-deep shaft with at least 2 caved levels, and a caved adit. Recorded pre-1940 production of 6,000 lb of lead.	Dumps contain about 1,000 tons of rock with an average gold content of 0.038 oz/ton. Mine may have vein-type, gold-lead resources. Fifteen samples were collected. Five grab samples from dump material contained trace to 0.11 oz/ton gold and traces of silver; two had 0.1% and 0.65% copper. Of 10 chip samples from veins and wall rock, 5 contained traces of gold and 3 had traces of silver and 0.07% to 21% fluorine; one of these samples also contained 0.12% copper. Other anomalous metal values were reported: 8 samples contained 11 to 150 ppm zinc; 12 had 11 to 150 ppm copper and 9 contained 9 to 47 ppm molybdenum.
674	Valerie group	0060712328 T09N R14E sec.29	Creek contains multiple deposits of fluvial sands and gravels. Channel width ranges from 50 ft to 6 ft. Sand and gravel depth ranges from 11 ft to 4 ft.	No workings.	Four samples from a 4 in. by 4 in. channel, 45 in. deep from surface to 3 in. into bedrock; contained no detectable gold.
675	Big Horn mine	0060710071 T09N R14E sec.29	Colorless-to-white quartz veins as thick as 4 ft cut andesite and quartz monzonite dikes and syenite. The veins trend N. 37° W. to N. 85° E., dip steeply west and east and contain pyrite, chalcopyrite, specularite and hematite. Some veins are brecciated and cemented with chlorite; shear and (or) gouge zones parallel some veins. Veins and veinlets of specularite and purple and green fluorite occur locally. In places, the syenite is silicified, bleached, and altered to clay and sericite. The andesite dike is cut by a syenite dike and both are cut by colorless quartz veinlets.	One 15-ft-long cut, 5 pits, 6 shafts as deep as 200 ft with 2 levels each, and 2 adits 120-ft and 60-ft long. Recorded production from 1918-1941 is 844 tons of ore which contained 4,844 oz gold, 59 oz silver, 10.684 lb lead, and 56 lb copper.	A 1920 California Division of Mines and Geology property examination (Tucker, 1920) indicated 6,000 tons of dump rock assaying \$5/ton at \$20.67/oz gold, and about 195,000 tons of reserves in place contained about 0.25 oz/ton gold and 1.5% copper. Under 1982 economic conditions, these are marginal reserves. The property may have additional vein-type gold-silver-lead-copper resources. Of 14 chip samples taken in 1982 of surface exposures of both host and vein material, 6 contained trace to 0.07 oz/ton gold and traces of silver and 3 had 0.1 to 0.941% copper. Ten grab samples were collected from dumps and small quartz stockpiles. Six contained gold and silver values ranging from trace to 0.1 oz/ton and trace to 0.25 oz/ton, respectively. Other anomalous metal values



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
676	Unknown	0060712329 T09N R14E sec.29	A pit dug is in the bottom of a narrow creek channel 300 ft east of the main Big Horn shaft. Syenite bedrock is exposed in pit the floor.	One 5 ft by 6 ft by 4 ft deep pit.	were reported: 4 samples contained 10 to 41 ppm lead; 11 had 6 to 290 ppm zinc; 18 contained 1 to 950 ppm copper; and 10 had 3 to 55 ppm molybdenum.  Four samples from a 4 in. by 4 in. channel 32 in. long cut in pit face from surface into bedrock. Upper two samples (20 in. total length) contained no gold. Two in layer of gravel immediately above bedrock contained 58 cents/yd <sup>3</sup> . First 10 in. of decomposed bedrock contained 54 cents/yd <sup>3</sup> .
677	Wild Ass	0060712331 T09N R14E sec.30	Quartz veins cut quartz monzonite and syenite. Veins are 4- to 12-in. thick, trend N. 10°-20° E., dip 70°-90° W., and are colorless to white quartz with limonite fracture coatings and a trace of pyrite. The quartz monzonite and syenite contain clay, epidote, and chlorite alteration. Local silicification in occurs in host rock near quartz veins.	One 15-ft-deep shaft and a 48-ft-deep decline.	This prospect may have vein-type, gold-bearing resources. Ten samples collected: 5 grab samples of dumps contained trace to 0.1 oz/ton gold and traces of silver; 2 samples contained 0.1% and 0.13% lead, and 0.029% and 0.095% fluorine. One chip sample of the vein contained 0.37 oz/ton gold and trace silver. Four chip samples of the host rock had 0.015, 0.01, 0.005, and trace gold. Other anomalous metal values were reported: 4 samples contained 91 to 180 ppm zinc; 9 contained 46 to 210 ppm copper and 7 to 100 ppm molybdenum.
678	Santa Anna	0060712330 T09N R14E sec.30	A 22-in.-thick, milky quartz vein, composed of multiple veinlets separated by clay seams, parallels an andesite dike in syenite. Both andesite and syenite are clay altered and contain a trace of pyrite and malachite in quartz.	One 7-ft-deep decline.	One chip sample of vein material contained 0.1% copper, 0.03% fluorine, and 22 ppm molybdenum.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
679	Lady Luck	0060712332 T09N R14E sec.30	Quartz veins and quartz monzonite dikes cut syenite and andesite host rock. Fractured veins (as thick as 3 ft) of massive white quartz strike N. 10°-20° E., dip 20°-50° NW., and contain minor limonite and specularite. Host rock is generally clay-altered, silicified and contains sericite, especially near veins, and limonite on some fractures.	Six pits.	Four chip and 7 grab samples collected. One grab sample of syenite dump rock contained 0.36 oz/ton silver. All four chip samples had traces of gold and silver, one had 0.32% copper, and fluorine content was from 0.02% to 0.15%. Two grab samples had 0.11% and 0.19% copper. Lead occurred in one sample (170 ppm); six samples contained zinc (48 to 330 ppm); 7 samples had 27 to 280 ppm, copper and 8 had 28 to 67 ppm molybdenum.
680	Unknown	0060712333 T09N R14E sec.31	A 3- to 7-ft-thick fault-controlled quartz vein is in syenite and quartz monzonite. The vein strikes north, dips 45°-65° W., and is traceable for about 800 ft. It is composed of white quartz cut by colorless quartz veinlets; minor colorless quartz veins cut across the main vein and host rock at N. 58° E., and dip 26° W. The host rock is intensely fractured locally, displays pre- and post- vein faults, contains sericite, traces of limonite, and some pink feldspar veinlets, is silicified near the vein, and contains clay alteration elsewhere.	Five pits scattered for about 800 ft along vein.	This prospect may have vein and disseminated gold-silver resources. Nine samples collected. All seven chip samples of quartz vein and syenite host contained trace to 0.06 oz/ton gold, trace to 0.05 oz/ton silver, and 0.02% to 0.07% fluorine. Two grab samples: one of white quartz contained traces of gold and silver; another of syenite contained 0.05 oz/ton gold and 0.03 oz/ton silver. Both grab samples contained 0.014% and 0.076% fluorine. Other anomalous metal values were reported: two samples contained 170 to 270 ppm lead; 5 samples contained 90 to 370 ppm zinc; copper and molybdenum content in all seven samples was 60 to 850 ppm and 23 to 80 ppm, respectively.
681	Gold Cross	0060712304 T09N R13E sec.36	Small quartz veinlets averaging one per foot cut medium-grained, fractured quartz monzonite. The quartz monzonite is locally altered to clay, and contains traces of iron oxides in fractures.	One pit.	One 3-ft chip sample of quartz monzonite contained 18 ppm lead, 24 ppm zinc, and 19 ppm copper.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
682	Golden Gift (Coarse Gold) mine	0060712334 T09N R14E sec.31	A bifurcating vein of semitranslucent quartz with pyrite cuts andesite and syenite. The vein is as thick as 1 ft, strikes N. 20° E., and dips 37° NW. Parallel calcite veins cut syenite. The host rock is moderately fractured and bleached and contains clay alteration.	One 35-ft-deep decline. Recorded production in 1935 was 16.5 oz gold and 20 oz silver from 24 tons of ore.	Mine may have gold-silver, vein-type resources. Six samples: 3 vein chip samples and one dump grab sample contained traces of gold and silver, 0.05% to 0.2% copper, and one had 0.019% fluorine. Two host-rock chip samples contained 0.034% to 0.098% fluorine. Five samples contained 9. to 42 ppm molybdenum.
683	Unknown	0060712335 T09N R14E sec.31	The only tabular quartz-rich structure, exposed in the pit, is a 25-ft-thick silicified zone at the andesite-quartz monzonite contact. This zone is composed of silicified andesite cut by colorless and milky quartz veinlets which contain pyrite. The andesite is cut by quartz monzonite dikes. Both are cut by subsequent fault and shear zones, some of which are silicified and bleached. Andesite has clay alteration with local admixtures of sericite and quartz. Quartz monzonite has weak clay alteration and is weakly bleached.	One pit and a 65-ft-long adit.	Six chip samples and two grab samples of dump material: dump samples contained traces of gold and silver and 0.12% to 0.25% fluorine. Four chip samples of andesite contained traces of gold and silver and 0.09% to 0.15% fluorine. A chip sample of quartz monzonite contained 0.14% fluorine. One chip sample from a silicified vein like structure contained traces of gold and silver. Two samples contained 220 and 450 ppm lead, and seven contained 18 to 230 ppm zinc. All eight samples contained 41 to 620 ppm copper and 44 to 170 ppm molybdenum.
684	Wild Cat	0060712336 T09N R14E sec.31	Colorless quartz, black chalcedony, barite, and magnetite veins cut syenite. The largest quartz vein is 1-ft thick, brecciated, cemented by limonite, strikes N. 20° E., and dips 70° NW. Fractures in syenite contain traces of malachite, limonite, and manganese oxides. Syenite is intruded by a quartz monzonite dike which has clay and silicic alteration.	Four pits.	Four samples collected. Two select samples of stockpiles contained traces of gold and silver. One stockpile sample, analyzed for barium and manganese had 37% and 0.024%, respectively. A 2-ft chip sample of a vein-breccia zone contained a trace of silver and 11.6% barium. An adjacent 7 ft chip sample from the hanging wall dike contained a trace of silver, and 6.03% barium. The four samples also contained anomalous zinc (43 to 57 ppm), copper (130 to 490 ppm), and molybdenum (16 to 78 ppm).

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
685	Long Chance	0060712475 T08N R14E sec.06	A 1-ft-thick quartz vein is centered in a 15-ft-thick clay-rich zone in andesite. The vein is colorless quartz, with a few milky quartz breccia fragments, and is cut by milky quartz veinlets. The vein contains a trace of fluorite. Andesite is silicified and has traces of epidote and chlorite on fractures.	One pit and two bulldozer cuts, each 45-ft long.	Two chip samples (one vein and one host): each contained 0.01 oz/ton gold and trace silver; the vein sample had 0.11% copper.
686	Copper Charlie	0060711533 T08N R14E sec.05	Area is covered by alluvial fans cut by arroyos.	No workings.	One pan sample from active arroyo bed; contained 0.8 cents/yd <sup>3</sup> (gold value calculated at \$400/oz.)
687	Golden Nugget	0060712337 T08N R14E sec.06	Numerous quartz veins, fractures, faults, shear and breccia zones, metallic mineral pods, and local syenite and aplite dikes cut andesite and quartz monzonite. Fault and vein trends are northwest to northeast. Host rocks, especially local rhyolite bodies, are generally propylitically altered, although rocks near the hidden Hill and the Big Horn faults are silicified, sericitic, and intensely bleached. Quartz veins, 1- to 6-in. thick, strike N. 15° W. to N. 15° E. and dip from 40° W. to 70° E., are colorless to white, and some are or are brecciated and cemented with clay or chlorite. Many contain limonite or iron-oxide stain. Blue and green fluorite veins occur locally; fluorite and quartz fill faults, fractures, and some dike-host contacts. Pyrite, chalcopryrite, malachite, azurite, magnetite, limonite, and manganese oxide are also present.	Ten cuts, 14 pits, 13 adits as much as 250-ft long, 4 declines, and 2 shafts as deep as 40 ft.	The prospect may have vein-type gold, disseminated gold, and a porphyry copper/molybdenum resource. Of the 111 samples collected, the 43 grab samples, 23 host and dump samples contained trace to 0.06 oz/ton gold, 15 contained trace to 1.4 oz/ton silver, and 1 contained 0.27% copper; 4 quartz stockpile samples had trace to 0.76 oz/ton gold and trace silver and 4 had 0.1 to 1.4% copper. Of 68 chip samples, 17 host rock samples contained trace to 0.08 oz/ton gold and 23 contained traces of silver; of 22 vein samples, 17 contained trace to 2.83 oz/ton gold (only 1 sample had more than 1 oz/ton) and traces of silver. Seven chip samples contained 0.08 to 25% fluorine; 2 samples had 0.010 to 0.22% copper. Of the 111 samples, 15 contained lead (100 to 620 ppm), 25 contained zinc (26 to 600 ppm), 89 contained copper (20 to 990 ppm), and 56 contained molybdenum (6 to 270 ppm).



Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
688	Hidden Hill mine	0060710125 T08N R14E sec.06	One major quartz vein and numerous smaller quartz veins, breccia zones, shears, faults, and gouge zones cut andesite. Near veins, andesite is silicified and altered to clay, with various amounts of chlorite and epidote. The principal quartz vein has a strike length of 325 ft, pinches and swells from 1-in.- to 18-in.-thick, and has an average thickness of 6 in., and strikes N. 30° E., dips 20° NW., and contains both colorless and white quartz with local comb structure and vugs; some vugs are filled with limonite. Locally the vein footwall is bounded by a 1-in.-to-6-in. clay or breccia layer. Pyrite and chalcopyrite occur in the main vein; orpiment, realgar, manganese oxides, limonite and malachite occur in minor parallel, en echelon, and crosscutting quartz veins.	Property contains a small abandoned mill, two cuts, 13 pits, three shafts, and 1 adit with about 800 ft of workings on 4 levels. Recorded production for pre-1907 mining was 1,602 oz gold; between 1913 and 1919, 1,000 tons of ore yielded 2,078 oz gold.	Mine dump contains about 4,000 tons of rock averaging 0.08 oz/ton gold and 0.08 oz/ton silver. Mine has about 550 tons of subeconomic, quartz-vein resources averaging 0.60 oz/ton gold. Assuming a 4-ft mining thickness is necessary, this would result in 4,000 tons of vein resources averaging 0.09 oz/ton gold. Mine may have additional gold resources within the vein. Of the 124 samples collected, 26 were grab samples of four types. A single mill-tailings sample contained 0.10 oz/ton gold, 0.35 oz/ton silver, and 0.45% copper. Eighteen dump samples contained trace to 0.17 oz/ton gold and trace silver; 7 had 0.1 to 0.22% copper. Four stockpile samples had from 0.03 to 0.12 oz/ton gold and traces of silver. Three samples of material backfilled into the main workings contained 0.02 to 0.37 oz/ton gold, traces of silver, and 0.076 to 0.17% copper. Of 97 chip samples collected, 28 were of vein quartz with trace to 6.5 oz/ton gold and trace to 1 oz/ton silver (2 of these samples had 3.5 and 11.7 oz/ton gold); two had 0.1 to 4.7% copper. Of 69 andesite chip samples, 22 contained trace to 0.1 oz/ton gold and traces of silver. Each of the 124 samples analyzed contained anomalous metal values: each had lead (150 to 2400 ppm); 77 contained zinc (9 to 630 ppm); 100 contained copper (16 ppm to 4.7%); and 105 contained molybdenum (7 to 540 ppm).
689	Unknown	0060711804 T08N R13E sec.06	Disseminated chrysocolla and pyrite in altered quartz monzonite.	One pit.	One sample--0.115% copper, 0.16% zinc, 0.90% lead, and 0.1 oz/ton silver (Sabine, 1984, p. 25, No. 5).

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
690	Silver Lode	0060711805 T08N R13E sec.06	Sulfides and secondary minerals containing silver, lead, zinc, and copper disseminated along altered joints in granite and in quartz veins. Altered zones and veins range from less than 0.1 ft to 1 ft thick; most are less than 0.5 ft thick.	Two adits, 200 and 85 ft long, three shafts, five pits, and one trench.	Twenty-seven samples were collected. Select and grab samples contained as much as 0.12 oz/ton gold, 1.8 oz/ton silver, 0.30% copper, 1.1% lead, and 3.8% zinc. Chip samples averaged 0.005 oz/ton gold, 0.114 oz/ton silver, 0.02% copper, 0.13% lead, and 0.33% zinc (Sabine, 1984, p. 16).
691	Iron Victory prospect	0060710221 T08N R12E sec.02	Lenses of magnetite and hematite with some chalcopyrite occur in a 400 ft by 150-ft skarn zone in a roof pendant of marble in diorite and granite.	One cut, one pit.	About 110,000 tons of iron-rich rock average 47.2% iron; the largest single body contains about 30,000 tons. About 150,000 tons of marble average 41.0% CaO and 11.7% MgO. These estimates are based on five samples of iron-rich rock and four of limestone (Sabine, 1984, p. 21).
692	Iron occurrence	0060711532 T08N R12E sec.01	Mixed granitic and metamorphic rocks in alluvium contain cobbles of hematite and magnetite.	None.	Iron ore comprises less than 1% of older alluvium (Gamble, 1959, p. 2).
693	Unnamed prospect	0060711806 T08N R13E sec.18	East-northeast-trending zone of en echelon quartz veins in altered granite is more than 2,000 ft long. Individual veins as thick as 3 ft and as long as 100 ft.	One pit.	Three samples--no significant values (Sabine, 1984, p. 25, No. 7).
694	Lucky Bird No. 1 and 2	0060712298 T08N R13E sec.14	Area is covered by alluvial fans cut by arroyos.	No workings.	One pan sample from active arroyo; contained no detectable gold.
695	Harper	0060710475 T08N R13E sec.22	Irregular occurrences of impure perlite from 6 to 30 ft thick and up to 100 ft long grade into ash flow rubble breccia and rhyolite. Three perlite outcrops are exposed along a northeast trend for a distance of 1/2 mi. Country rocks are banded rhyolite flows and rhyolite tuffs.	Three shallow prospect pits.	Two samples of impure perlite with banded rhyolite, CMH-5 and CMH-6. CMH-6 contained 4 ppb gold.
696	Unnamed occurrence Unknown	0060712914 T08N R13E sec.23	Chalcedony float along a zone of fault breccia in basaltic andesite flows, bedded ash flow tuff, and tuff breccia.	None.	Five samples of tuff breccia, chalcedony, and basaltic tuff breccia CMH-10, 11, 12, 13, 14. CMH-14 contained 8 ppb gold. CMH-11 contained 24.3 ppm uranium. Four samples contained over 800 ppm barium.

Table 2. Mines and prospects in the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Map no.	Name (Alternate name) Owner/operator	MILS number Location	Summary	Workings and production	Sample and resource data
697	Pumice prospect Unknown	0060712913 T08N R13E sec.24	Tuff and tuff breccia bed with up to 50% pumice clasts in tuff matrix. The bed is about 10 ft thick and grades into tuff breccia above and below. Bed strikes northeast and dips gently southeast.	Three pits, each about 30 ft long, are about 130 ft apart.	One sample of pumiceous tuff and tuff breccia, CMH-4. CMH-4 contained 680 ppm barium.
698	Dolomite Queen Unknown	0060712912 T09N R15E sec.36	Massive, light gray dolomite outcrops are exposed over a 1,000 ft by 150 ft area. Dolomite is coarse grained and jointed. A contact with granitic rocks is exposed for about 50 ft. The dolomite shows contact metamorphism for only about 1 ft from the granitic contact.	None.	One sample of unaltered dolomite, CMH-1. One sample of altered dolomite from the granitic contact, CMH-2. CMH-2 contained 6,390 ppm barium.
699	Pumice occurrence Unknown	0060712078 T08N R15E sec.01	Pumice occurs as clasts which range from 1 in. to 10 in. in size within beds of ash flow tuff and tuff breccia. Exposures of pumice-bearing tuff are less than 100 ft long and 10 ft thick within bedded tuff and tuff breccia.	None.	One sample of tuff breccia, CMH-3.
700	Unknown	0060712082 T09N R17E sec.11	A 15-20 ft thick quartz vein strikes north and dips about 80° W. The vein occurs in a north-trending shear zone through quartz monzonite. The vein can be traced in outcrop for about 1,500 ft. Moderate iron-oxide staining. No mineralization was observed.	One vertical shaft (75 ft deep), and one small trench. No known production.	Two samples (CTN-54, -55) of fractured and iron-oxidized quartz contained no significant concentrations of precious or base metals.
701	Fenner Hills Gold (Yellow Medicine) James Schmitt	0060711548 T09N R17E sec.14	Property is underlain by quartz monzonite, granitic gneiss, augen gneiss, schist, and metaquartzite. Narrow and discontinuous shear zones follow foliation planes and contacts between rock types in N. 10° E. to due east trends, dipping 50° NW to vertical. A 6.0-ft-wide quartz vein trending N. 30° E. cuts granitic rock near the main shaft. Slight argillic alteration in small, select areas.	Two vertical shafts, one 30-ft inclined shaft, and at least 18 pits and trenches. Trenches on the property were dug in the 1950's, primarily for uranium. No production records.	Six samples (CTN-19-22, -56, and -57). Three samples of quartz veins (CTN-21, -22, -57) assayed 563 ppb gold (CTN-21), 1,180 ppm copper (CTN-22), and 5,500 ppm copper (CTN-57). One sample of granitic gneiss (CTN-19) contained 1,220 ppb gold and 3,300 ppm zinc.

Table 3. Identified Metallic Mineral Resources in the East Mojave National Scenic Area

Map No.	Mine/Prospect	Location	Commodity	Reserves/Resources		Grade	Total Metal	Data Source	Total Value1/ \$Million
				Type/Category	Tons (Thousands)				
675	Big Horn mine	Arrowhead district, Providence Mountains	Gold	Inferred reserve base 2/	200	0.25 oz/ton	50,000 oz	MLA OFR 32-84	19
290	Big Hunch	New York Mountains	Molybdenum Copper	Inferred reserve base	87,000	.027% .016%	47 million lb 28 million lb	BLM Final EIS and proposed plans, Appendix, vol. G, 1980 (revised 1982) p. 103 Placer Amex, Inc.	170 40
560	Black Jack mine	Providence Mountains	Iron	Inferred reserve base	180	58%	93,000 tons	MLA OFR 47-88	5
329	Castle Mountain project	Hart district, Castle Mountains	Gold	Reserve base 2/	25,900 13,500	.055 oz/ton .048 oz/ton	1.4 million oz 820,000 oz	CDMG, California Geology, 8/89, Viceroy Gold Corporation	540 240
457	Castor-Pollux (Columbia mine)	Providence Mountains	Silver Gold	Inferred reserve base	24	Ag 9.1 oz/ton Au .05 oz/ton	218,000 oz 1,200 oz	MLA OFR 47-88	2
37	Colosseum mine (current producer)	Ivanpah district, Clark Mountains	Gold	Reserve base	4,500	.064 oz/ton	290,000 oz	Bond-Colosseum	110
618	Cornfield Springs (Consolidated mine)	Providence Mountains	Iron	Inferred reserve base	110	60%	68,000 ton	MLA OFR 47-88	3
408	Death Valley mine	New York Mountains	Gold Silver	Reserve base	<1 6	Au 0.10 oz/ton Ag 17 oz/ton Au 0.12 oz/ton Ag 35 oz/ton	50 oz 8,500 oz 720 oz 210,000 oz	Report XXVI of State Mineralogist, July 1930, CDM 6, p. 275-277.	2
578	Denver	Hackberry Mountains	Gold	Inferred reserve base			W 3/	Channel Resources	W
497	Globe mine	Providence Mountains	Gold Silver	Inferred reserve base	110	Au 0.050 oz/ton Ag 1.00 oz/ton	5,500 oz 110,000 oz	MLA OFR 47-88	3
417	Golden Quail project (exploration by Atlas Gold Corp.)	New York Mountains	Gold	Inferred reserve base	1,500	.060 oz/ton	90,000 oz	Atlas Gold Corp.	35
691	Iron Victory prospect	Granite Mountains	Iron	Inferred reserve base	110	47.2%	51,900 ton	MLA OFR 28-84	3
203	Ivan group (exploration by Homestake and Vanderbilt Mines)	Ivanpah Mountains	Gold	Reserve base			W	Homestake/Vanderbilt Gold Corp.	W
45	Juniper group	Clark Mountains	Silver Copper Fluorite	Inferred reserve base	300	Ag 10.0 oz/ton Cu 3.0% F 25%	3 million oz 9,000 tons 75,000 ton	Prince Smith (owner)	31
368	Lucky mine (ODM claim group, Renville prospect)	Old Dad Mountain	Gold	Reserve base			W	Wind River Mining Corp.	W
178	Morning Star (current producer)	Ivanpah Mountains	Gold	Reserve base	3,000	.060 oz/ton	180,000 oz	Vanderbilt Gold Corp.	69
369	Old Dad Mountain deposit	Old Dad Mountain	Iron	Reserve base	560	57%	320,000 ton	Lamey, 1945, p. 67	17
592	Rattlesnake Gold prospect	Vontrigger Hills	Gold	Reserve base			W	Noranda	W
121	Telegraph mine	Halloran Spring	Gold Silver	Reserve base Inferred reserve base	73 525	Au 0.51 oz/ton Ag 1.18 oz/ton	37,000 oz 84,000 oz	Joseph Owen, consult. report in files (1980)	15
210	Teutonia Silver mine	Teutonia Peak	Silver	Inferred reserve base			W	Ralph E. Pray, company report	W
289	Tungsten King	Vanderbilt district, New York Mountains	Tungsten	Reserve base			W	Tungsten Springs Mining Co.	W
258	Vanderbilt mine	Vanderbilt district, New York Mountains	Gold	Reserve base			W	Vanderbilt Gold Corp.	W
629	Vulcan mine	Providence Mountains	Iron	Inferred reserve base	3,000	50.0%	1.5 million tons	MLA OFR 47-88	78
Other undistributed 4/									548
							METALLICS TOTAL		1,930
							NON-METALLICS TOTAL		3,110
							EMNSA TOTAL		5,040

1/ Average price per unit was obtained from USBM Mineral Commodity Summaries (1990) and Mineral Facts and Problems (1985 edition). Prices used are: Gold, \$385/oz; Silver, \$5.55/oz; Copper, \$1.32/lb; Iron ore, \$51.79/ton; Lead, \$0.40/lb; Zinc, \$0.83/lb; Tungsten, \$56 per mtu WO<sub>3</sub>; Molybdenum, \$3.65/lb. Data may not reflect totals shown because of independent rounding.

2/ Reserve base is that part of an identified resource that meets specified minimum physical and chemical criteria related to current mining and production practices, including those for grade, quality, thickness, and depth. Reserve base includes resources that are economic, marginally economic, and subeconomic. Inferred reserve base estimates are based largely on knowledge of the geologic character of a deposit and for which there may be no samples or measurements.

3/ W - Figure withheld to avoid disclosing individual company confidential data; Included with other undistributed.

4/ Includes \$6 million total value from following 19 mines and prospects, each containing less than \$1 million estimated resource value: Blue Buzzard (lead), Bonanza King (silver), Buena Vista (gold), California mine (gold), copper World (copper), Dobe No. 2 (gold, silver), Double H No. 1 and No. 2 (gold, silver), Frisco No. 3 (gold, silver), Good Hope (gold), Green Scorpion (gold), Hidden Hill (gold), Mid Hills-Round Valley (gold), Rex (gold), Silver King (silver), SS No. 28 (gold, silver), SS No. 29 (gold, silver), Sunnyside (gold), Unnamed (gold, silver), Vontrigger (Copper).





Table 4. Identified Non-Metallic Resources, East Mojave National Scenic Area

Map No.	Mine/Prospect	Location	Commodity	Reserves/Resources		Data Source	Total Value 1/ \$Million
				Type/Category	Tons (1,000's)		
376	Aiken mine	Lava Beds	Cinders	Reserve base 2/ (currently producing 25,000 tons/year)	8,000	MLA OFR 67-85, Russel Aiken	32
321 328 329	Castle Mountain	Castle Mountains	Kaolin clay	Inferred reserve base 2/ North pit - 1000 ft x 700 ft x 50' ft depth; South pit - 1200 ft x 900 ft x 50' ft depth	7,000(e)	California Geology, p. 140, 1989	568
131	Cima mine	Lava Beds	Cinders	Reserve base	12,000	MLA OFR 67-85, Emerson Ray	48
294	Copper Queen	New York Mountains	Fluorite	Reserve base	W	Homestake Mining Co. unpublished report	W 3/
130	Cinder Cone Area	Lava Beds	Cinders	Inferred reserve base	30,000	MLA OFR 67-85	120
623 628	Dolomite (Goodsprings Formation)	Providence Mountains	Dolomite	Inferred reserve base	12,000	MLA OFR 47-86	48
307	Erin/More Lite mine	Castle Mountains	Perlite	Inferred reserve base	2,000	Field work, USBM, 1990	66
166	Georgia Marble	Striped Mountain	Dolomite	Inferred reserve base	50,000	Oral comm.	200
579	Getchell Clay mine	Hackberry Mountain	Bentonitic clay	Inferred reserve base	W	FRM Minerals, Inc.	W
266	Ivanpah Limestone deposit; Meevint claims	New York Mountains	Limestone and wollastonite	Inferred reserve base	W	Pfizer, Inc. unpublished report	W
268	Ivanpah Wollastonite deposit	New York Mountains	Wollastonite	Inferred reserve base	W	Pfizer, Inc. unpublished report	W
652	Kelso Dunes	Kelso Dunes	Industrial sand	Inferred reserve base 80% quartz with byproduct feldspar (5%), gold (0.0013 oz/ton, ilmenite 0.35%) and magnetite (1-4%)	16,000,000 in main dune field	USGS OFR 84-647; USBM OFR 107-83	4/
301	Pfizer Sericite pit	New York Mountains	Talc	Inferred reserve base	1,385	Pfizer Inc. 1981112 Reclamation Plan	114
298	Pleuss-Stauffer	New York Mountains	Limestone	Inferred reserve base	W	Pleuss-Stauffer Inc., BLM, 1978, Interim Worksheet; BLM, 1980, Final EIS and proposed plan, Appendix, vol. G, p. 149	W
383	Rainbow group (Bernice claims); Mosaic Queen; (Esther claims)	Cowhole Mountains stone (marble, trachyte, sandstone)	Decorative stone	Inferred reserve base report	W	Loyde H. Metzner Consultant, unpublished	W
318	White Hart No. 1	Castle Mountains	Kaolin clay	Reserve base	W	ALII Enterprises, Inc., report, USBM files	W
Other undistributed							1,914
NON-METALLIC TOTAL							3,110

1/ Average price per unit was obtained from USBM Mineral Commodity Summaries (1990) and Mineral Facts and Problems (1985 edition). Prices used are: Bentonitic clays, \$28.30/st; Cinders, \$4/st; Dolomite-limestone, \$4/st; Fluorite, \$164/st; Industrial sand, \$13.60/st (byproduct ilmenite and magnetite are \$53/st and \$51.79/st); Kaolinitic and sericitic clays, \$81.19/st; Marble (decorative), \$17.34/st; Perlite, \$33.05/st, and Talc, \$82.31/st. Data may not reflect totals shown because of independent rounding.

2/ Reserve base is that part of an identified resource that meets specified minimum physical and chemical criteria related to current mining and production practices, including those for grade, quality, thickness, and depth. Reserve base includes resources that are economic, marginally economic, and subeconomic. Inferred reserve base estimates are based largely on knowledge of the geologic character of a deposit and for which there may be no samples or measurements.

3/ W - Figure withheld to avoid disclosing individual company confidential data; included with other undistributed.

4/ Raw material unsuitable for glass sand; upgrading with available technology may make mining feasible; no dollar value estimated.

(e) - Estimated



Table 5. Recorded Mineral Production  
East Mojave National Scenic Area

Commodity	Quantity	Map No.	Largest Producing Mines in Order of Descending Output	Years of Production
<u>Metals</u>				
Gold (ounces)	539,565 <sup>1/</sup>	57 178 163	Colosseum Morning Star New Trail	1929-1939, 1987-1990 1907-1943, 1986-1990 1916-1919, 1929-1950
Silver (ounces)	602,014 <sup>2/</sup>	21 85 408 96 565 22 173 264	Beatrice Copper World Death Valley Mohawk Bonanza King Monitor Standard No. 1 Boomerang	1870-1880 1906-1940 1907-1920 1918-1952 1883-1887, 1901-1960 1889-1942 1902-1908 1897-1925
Copper (pounds)	8,037,910	85 173 96 163 300	Copper World Standard No. 1 Mohawk New Trail Sagamore	1906-1940 1902-1908 1918-1952 1916-1919, 1929-1950 1901-1951
Lead (pounds)	8,966,153	85 96 300	Copper World Mohawk Sagamore	1906-1940 1918-1952 1901-1951
Zinc (pounds)	1,793,422	96	Mohawk	1918-1952
Iron (tons)	1,501,000	629	Vulcan	1942-1947
Tin (pounds)	3,200	193	Evening Star	1941
Tungsten (short ton unit)	3,630	39 190 193 194	Mojave Tungsten Standard No. 2 Evening Star Hartmann	1915, 1916 1934 1941 1941
<u>Nonmetals</u>				
Bentonite (tons)	500	579	Getchell	?
Cinders (tons)	1,560,000	376 131	Aiken Cima	1954-1990 1948-1960
Fluorite (tons)	4,538	33 45	Pacific Juniper	1955-1961 1955
Gemstone (pounds)	100,000(e)	85	Copper World	1977-1978
Kaolin (tons)	552,837	321 328	C-1 Clay P. S. Hart	1937-1986 1933-1986
Magnesite (tons)	125	175	New Trail	1918, 1930
Marble (tons)	100	191	Geer Dolomite	?
Perlite (tons)	6,217	307	Erin/More-Lite	1945-1952
Talc (tons)	25,000(e)	301	Sericite	Current

(e) - estimate.

<sup>1/</sup> - 324,700 oz of gold production from 1986-1990.

<sup>2/</sup> - does not include an estimate for Beatrice mine of \$3.5 million bullion product (Hewett, 1956) from 1870 to 1880 (estimated 3.5 million oz of silver).





Table 6. Metallic Identified Resources by Commodity, East Mojave National Scenic Area

Commodity	Map No	Mine/property	Area	Quantity (Thousands)	Value \$ Million
Gold	675	Big Horn	Providence Mountains	50 oz	19
	329	Castle Mountain	Castle Mountains	2,020 oz	780
	37	Colosseum	Clark Mountains	290 oz	110
	578	Denver	Hackberry Mountains	W	W <sup>1/</sup>
	497	Globe (includes silver)	Providence Mountains	5 oz	3
	417	Golden Quail	New York Mountains	90 oz	35
	203	Ivan Group	Ivanpah Mountains	W	W
	368	Lucky Mine	Old Dad Mountain	W	W
	178	Morning Star	Ivanpah Mountains	180 oz	69
	592	Rattlesnake	Vontrigger Hills	W	W
	121	Telegraph (includes silver)	Cinder area	37 oz	15
	258	Vanderbilt	New York Mountains	W	W
		Other Undistributed		401 oz	154
		Total gold - 12 properties		3,075 oz <sup>2/</sup>	1,185 <sup>2/</sup>
Iron	560	Black Jack	Providence Mountains	93 st	5
	618	Cornfield Springs	Providence Mountains	66 st	3
	691	Iron Victory	Granite Mountains	52 st	3
	369	Old Dad	Old Dad Mountain	320 st	17
	629	Vulcan	Providence Mountains	1,500 st	78
		Total iron - 5 properties		2,031 st	106 <sup>2/</sup>
Molybdenum	290	Big Hunch (includes copper)	New York Mountains	47,000 lb	210 <sup>3/</sup>
Silver	457	Castor Pollux (includes gold)	Providence Mountains	218 oz	2
	408	Death Valley (includes gold)	New York Mountains	218 oz	2
	45	Juniper (includes fluorite and copper)	Clark Mountains	3,000 oz	31
		Total Silver - 4 properties	W		W
Tungsten	289	Tungsten King	New York Mountains	W	W
Other Undistributed					394
METALLICS TOTAL					1,930 <sup>2/</sup>

<sup>1/</sup> W - Figure withheld to avoid disclosing individual company confidential data; included with other undistributed.

<sup>2/</sup> Data may not add to totals shown because of independent rounding.

<sup>3/</sup> The BLM in its final EIS (V. G. revised January 1982) on the California Desert Conservation Area infer a resource of 800 million pounds of molybdenum (p. 103). This BLM data was preliminary and subject to revision. Subsequent work by the Bureau of Mines was unable to substantiate this larger estimate.



Table 7. Non-Metallic Identified Resources by Commodity, East Mojave National Scenic Area

Commodity	Map No.	Mine/property	Area	Quantity Million/st	Value \$ Million
Cinders	376	Aiken	Cinder cones	8	32
Cima	131	Cima	Cinder cones	12	48
	130	Cinder	Cinder cones	30	120
Clay					
(Bentonite)	579	Getchell	Hackberry Mountains	W	W
(Kaolin)	321, 328	Castle Mountains	Castle Mountains	7	568
(Kaolin)	321	C-1 Open pit	Castle Mountains	W	W
(Kaolin)	318	White Hart No. 1	Castle Mountains	W	W
Dolomite/Limestone	623, 628?	Dolomite (Goodsprings Fm.)	Providence Mountains	12	48
	166	Georgia Marble (Dolomite)	Striped Mountains	50	200
	266	Ivanpah Limestone (Meevint claims)	New York Mountains	W	W
	298	Pleuss-Staufer limestone	New York Mountains	W	W
Fluorite	294	Copper Queen	New York Mountains	W	W
	45	Juniper	Clark Mountains		1/
Perlite	307	Erin/Morelite	Castle Mountains	2	66
Stone (Decorative)	383	Rainbow group	Cowhole Mountains	W	W
Sand (Industrial)	652	Kelso Dunes	Kelso Dunes	16,000 (In main dune field)	No estimate
Talc	301	Pfizer Sericite	New York Mountains	1	114
Wollastonite	268	Ivanpah Wollastonite	New York Mountains	W	W
Other Undistributed				254	1,914
NON-METALLIC TOTAL					3,110

1/ Total included with metal value (75,000 st of fluorite valued at \$12 million).





Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CAL-1	595	Grab	NA	Bull quartz from veins in quartz monzonite minor malachite covellite vein N30W vert
CAL-2	595	Chip	.7	Bull quartz vein in quartz monzonite-minor covellite arsenopyrite vein N15W vert
CAL-3	595	Chip	2.5	Silicified shear zone with quartz vein in quartz monzonite-minor malachite and pyrite vein N15W, vertical
CAL-4	588	Grab	NA	Granite gneiss with chlorite-minor malachite and azurite along fractures
CAL-5	588	Grab	NA	Granite gneiss with chlorite-minor malachite and azurite along fractures
CAL-6	590	Chip	1.0	Granite gneiss with quartz veins-quartz heavily iron oxide stained with minor sulfide vein N10E, 55NW
CAL-7	590	Grab	NA	Quartz veins in granite gneiss-veins are moderately iron-oxide stained and have some red chalcedony as veinlets
CAL-8	591	Grab	NA	Quartz veins in granite gneiss-quartz is moderately iron stained with minor malachite-no visible sulfides (vein N50E, 5SE)?
CAL-9	589	Grab	NA	Quartz vein in granite gneiss quartz contains visible galena and pyrite vein N65E, 50NE
CAL-10	599	Grab	NA	Quartz vein in quartz monzonite with numerous basic dikes, grey fine-grained sulfide, malachite, and azurite (total less than 5%) vein N25W, 70SW
CAL-11	599	Grab	NA	Sample from ore bin quartz with moderate iron-oxide stain, visible galena, malachite, and azurite (total less than 1%) vein N75W, 65SW
CAL-12	599	Grab	NA	Sugary light gray quartz from dump of winze; minor disseminated sulfides and malachite (less than 1%); vein N80W, 50NE
CAL-13	598	Grab	NA	Quartz vein with moderate iron-oxide staining and minor malachite quartz monzonite country rock, vein N80W, 35NE
CAL-14	598	Grab	NA	Quartz vein sugary light grey with disseminated sulfides and minor malachite quartz monzonite country rock vein N35W, 76NE
CAL-15	597	Grab	NA	Quartz vein grey sugary with minor malachite quartz monzonite country rock. vein N60W, 80NW
CAL-16	593	Chip	4.5	Shear zone-granite with argillic alteration-highly iron-oxide stained with malachite; no visible sulfides. Country rock granite gneiss; shear N30E, vert
CAL-17	593	Grab	NA	Metamorphic rock (granitic gneiss) with considerable malachite and iron oxide staining
CAL-18	593	Grab	NA	Siliceous granite gneiss from dump near mill malachite iron oxide stain
CAL-19	593	Grab	NA	Quartz with iron oxide staining in granitic gneiss
CAL-20	594	Grab	NA	Quartz vein with minor iron oxide staining no visible sulfides in quartz monzonite country rock vein N10W, 55NE

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CAL-21	594	Grab	NA	Quartz monzonite slight sericitic alteration with minor chalcopryrite, azurite, and malachite
CAL-22	594	Grab	NA	Silicified quartz monzonite moderate sericitic alteration along shear zone minor malachite chalcopryrite visible
CAL-23	594	Chip	2.2	Shear zone with quartz veins and sericitic alteration in quartz monzonite country rock minor malachite staining shear N25W, vert
CAL-24	594	Grab	NA	Quartz vein heavily iron oxide stained with minor malachite in quartz monzonite vein N35W, 80NE
CAL-25	594	Chip	4.0	Shear zone with quartz stringers in quartz monzonite. Quartz is heavily iron oxide stained with pyrite boxwork and minor malachite staining shear N15W, 75NE
CAL-26	593	Chip	100	Chip across red rhyolite flow at 5-ft intervals no visible mineralization or alteration
CAL-27	592	Grab	NA	Black sand layer in dry wash. Approximately 20 percent magnetite
CAL-28	594	Grab	NA	Shear zone with quartz veins, minor malachite staining and minor grey fine-grained sulfides. Shear zone is hydrothermally altered (sericite) vein N15W, 50NE
CAL-29	594	Grab	NA	Quartz monzonite with sericitic alteration and quartz veins grey fine-grained sulfides as veinlets; also malachite and azurite staining; vein N50W, 70NE
CAL-30	588	Chip	1.5	Quartz vein with minor iron oxide staining; granite gneiss country rock; vein N70W, 60NE
CAL-31	588	Grab	NA	Iron-oxide stained hydrothermally altered granite gneiss; no visible sulfides; shear E-W 80S
CAL-32	594	Grab	NA	Quartz vein with moderate iron-oxide staining; minor malachite and azurite. Quartz monzonite country rock
CAL-33	594	Chip	.7	Quartz vein heavily iron oxide stained with fine-grained gray sulfides, malachite, and azurite; total 10% quartz monzonite country rock. Vein N12W, 48NE
CAL-34	594	Grab	NA	Quartz vein heavily iron oxide stained. Vein in shear zone is up to 1.5 ft thick N35W, 65NE
CAL-35	594	Grab	NA	Bull quartz from stockpile at shaft collar (CAL-34)
CAL-36	594	Grab	NA	Quartz vein material from stockpile at shaft collar; vein has malachite and azurite; N12W, 70NE
CAL-37	594	Grab	NA	Quartz veins with minor iron-oxide staining sulfides and malachite vein N15W, 45NE in quartz monzonite
CAL-38	594	Grab	NA	Quartz vein in shear zone; minor iron oxide staining as well as chalcopryrite and malachite (less than 1%); zone N15W, 45NE
CAL-39	594	Grab	NA	Quartz vein in shear zone; minor iron oxide staining; hydrothermally altered quartz monzonite. Zone N10E, 55SE
CAL-40	594	Grab	NA	Quartz vein in sheared quartz monzonite; no visible sulfides; N10W, vert
CAL-41	594	Chip	4.0	Channel sample through layer of decomposed quartz monzonite hydrothermally altered; no visible sulfides

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CAL-42	594	Chip	5.0	Quartz vein in shear zone in quartz monzonite vein (1 ft); moderate to heavy iron oxide staining; shear (4 ft); sericitic altered quartz monzonite zone N40W, 55NE
CAL-43	594	Chip	1.5	Quartz vein with moderate to low iron oxide staining; vein in sheared quartz monzonite; N15W, 80NE
CAL-44	594	Grab	NA	Quartz vein exposed in shaft-minor iron oxide staining and pyrite pseudomorphs; vein N25W, 75NE
CAL-45	594	Grab	NA	Quartz veins E-W 55N; minor iron oxide staining fresh pyrite and chalcopyrite with minor malachite; slightly altered quartz monzonite country rock
CAL-46	594	Grab	NA	Quartz vein with malachite azurite; vein N50W, vert
CAL-47	594	Grab	NA	Quartz vein; no visible sulfides; N75E, 65NW
CAL-48	594	Grab	NA	Quartz vein; no visible sulfides; N55E, 45NW
CAL-49	594	Chip	.8	Quartz vein in pit; no visible sulfides; minor hydrothermal alteration and iron oxide staining
CAL-50	594	Chip	3.5	Quartz vein minor iron oxide staining and no visible sulfides N50W, 65NE
CAL-51	596	Chip	2.5	Shear zone in quartz monzonite with 1 ft quartz vein; minor iron oxide stain, no visible sulfides; zone N56E, 59NW
CAL-52	596	Chip	2.5	Quartz vein in shear zone; no sulfides and minor iron oxide staining along fractures; vein N70E, 53NW
CAL-53	596	Chip	.8	Gouge from shear zone above
CAL-54	596	Chip	.8	Quartz vein with heavy iron oxide staining; no visible sulfides; N60W, 80NE
CAL-55	596	Grab	NA	Quartz vein; minor malachite staining; vein N40W, vert, in quartz monzonite country rock.
CAL-56	596	Chip	.5	Gouge adjacent to quartz vein in CAL-55 minor iron oxide and malachite staining
CAL-57	596	Chip	4.5	Quartz vein with bornite, azurite, and malachite; moderate iron oxide staining; N80W, 60NE; quartz monzonite
CAL-58	594	Chip	1.0	Shear zone with quartz vein and gouge. There is chalcopyrite, bornite, and malachite (10%); zone N10W, 50NE
CAL-59	594	Grab	NA	Quartz vein with minor iron oxide staining; no visible sulfides N40W, 55NE
CAL-60	596	Chip	3.0	Shear zone with 1 ft quartz vein all heavily iron oxide stained no visible sulfides N80W, 55NE
CAL-61	596	Chip	4.0	Shear zone with 1 ft quartz vein all heavily iron oxide stained no visible sulfides N55W, 55NE
CAL-62	594	Chip	4.0	Sheared quartz vein with heavy iron oxide containing shear zone with gouge and brecciated quartz monzonite country rock, N65W, 60NE
CAL-63	594	Chip	1.5	Quartz vein in heavily iron oxide stained N70W, 50NE
CAL-64	596	Chip	4.0	Quartz vein with bornite, chalcopyrite, malachite, and azurite vein N70W, 40NE



Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CAL-65	596	Chip	.8	Quartz vein with chalcopryite, bornite, malachite, and azurite (5% total) N70W, 40NE Quartz monzonite country rock
CAL-66	596	Grab	NA	Shear zone with quartz vein N75W 60NE zone is about 6' thick with interfingering quartz veins
CAL-67	596	Grab	NA	Quartz vein blue grey in color no visible sulfides vein N50E, 60NW
CAL-68	596	Grab	NA	Sample of quartz from stockpile? No visible sulfides
CAL-69	596	Grab	NA	Sample from dump malachite and azurite stained quartz and quartz monzonite
CAL-70	592	Grab	NA	Composite sample from heap leach pad E side
CAL-71	592	Grab	NA	Composite sample from heap leach pad W side
CAL-72	592	Grab	NA	Granite gneiss on dump of pit minor quartz and iron oxide staining
CAL-73	592	Grab	NA	Shear zone with quartz stringers in granite gneiss minor malachite and azurite staining zone N10E, vert
CAL-74	592	Grab	NA	Shear zone with quartz vein minor malachite. Azurite vein N10E, vert granite gneiss
CAL-75	592	Chip	15.0	Sheared altered granite gneiss no visible sulfides
CAL-76	592	Chip	6.0	Brecciated quartz vein with heavy iron oxide staining vein N70W, vert
CAL-77	592	Chip	5.0	Shear zone with minor silicification N10W, 70SW granite gneiss
CAL-78	592	Grab	NA	Quartz vein with minor malachite azurite no visible sulfides vein N-S, vert
CAL-79	592	Chip	3.5	Quartz vein brecciated and heavily iron oxide stained No visible sulfides N35W, vert
CAL-80	592	Grab	NA	Composite sample of quartz veins and shear zones in trench zones N70E, 55SW No visible sulfides
CAL-81	596	Grab	NA	Grab of ore? stockpile at mill chalcopryite, pyrite, azurite, malachite (total 2%)
CAL-82	596	Chip	7.5	Quartz vein in shear zone vein 4.0 ft N70E, 42NW with malachite, azurite, and possible wolframite
CAL-83	596	Chip	3.8	Quartz vein with moderate iron oxide staining and minor azurite vein N85E, 42NW
CAL-84	596	Grab	NA	Mill tailings (fine)
CAL-85	596	Grab	NA	Mill tailings (coarse)
CAL-86	594	Chip	6.0	Quartz vein with moderate iron oxide staining no visible sulfides vein N45W, 48NE
CAL-87	594	Chip	1.0	Quartz vein with iron oxide and malachite staining N30W, 50NE
CAL-88	596	Grab	NA	Grab of stockpile on pit dump; no visible sulfides; quartz vein in pit N35W, 70NE
CAL-89	596	Chip	2.0	Quartz vein with iron oxide along fractures vein E-W, 45N in quartz monzonite country rock

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CAL-90	594	Chip	4.5	Shear zone with several .2 to 3 ft quartz veins moderate iron staining no visible sulfides N-S, 55E
CAL-91	596	Chip	1.2	Quartz vein with malachite and azurite no visible sulfides N10W, 75NE shear zone in quartz monzonite
CAL-92	596	Grab	NA	Quartz vein with chalcopryrite altering to bornite (2-5%) N30E, 15NW in quartz monzonite
CAL-93	592	Chip	12.0	Chip of granite gneiss outcrop with minor silicification and iron oxide staining
CAL-94	592	Chip	5.0	Granite gneiss no sulfides or copper staining; minor iron oxide staining
CAL-95	592	Chip	5.0	Silicified zone N65W, 85SW no visible sulfides
CAL-96	592	Chip	2.5	Shear zone in granite gneiss N70E, 18SE minor quartz stringers moderate iron oxide staining, no visible sulfides
CAL-97	592	Chip	2.0	Chip of pegmatite zone in granite gneiss
CAL-98	592	Chip	7.0	Chip of hydrothermally altered zone with pegmatite vein in granite gneiss zone N35E, vert
CAL-99	592	Chip	66.0	Chip at 2.0 ft intervals in granite gneiss with heavy iron oxide staining and pink pegmatite veins
CAL-100	592	Chip	3.0	Chip across heavily iron oxide stained zone with .5 ft pegmatite vein N35E, vert in granite gneiss.
CDC-1	211	Select	NA	Sample from 20 in. wide shear zone in granite contains pyrite, iron oxides, and copper oxides.
CDC-2	211	do	NA	Dump sample of iron oxide stained and silicified granite/quartz monzonite. Shear zone and quartz vein strikes N70E, dips 84S. Vein varies from 6 to 14 in. thick in outcrop.
CDC-3	211	do	NA	Chloritic alteration and minor limonite stain in quartz monzonite.
CDC-4	207	do	NA	Chloritic schist with quartz and iron oxides.
CDC-5	207	do	NA	Dump sample of malachite and chrysocolla coated silicified quartz monzonite. Extensive iron oxide staining in present.
CDC-6	208	Grab	NA	Fluorite is disseminated in an intensely altered monzonite.
CDC-7	208	do	NA	Quartz monzonite with minor limonite stain.
CDC-8	206	do	NA	Slightly calcareous quartzite and argillite underlying thin veneer of quartz monzonite.
CDC-9	206	do	NA	Porphyritic granite.
CDC-10	203	Select	NA	Quartz vein, up to 14 in. thick, contains much limonite. Host rock is porphyritic granite, argillite, and quartzite.
CDC-11	204	do	NA	Dump sample of heavily limonite stained granitic rock and quartz.
CDC-12	204	do	NA	Sample of 12 to 16 in. thick contact zone between heavily iron oxide stained argillite and fine grained diorite (?). Contact strikes N., and dips 36W

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CDC-13	203	Grab	NA	Fine grained diorite (?) with some iron oxides, minor bleaching, and some thin veins of calcite and/or siderite.
CDC-14	203	Select	NA	Dump sample of highly friable granitic rock with propylitic alteration and much iron oxide.
CDC-15	203	Grab	NA	Sample at face of adit in completely kaolinized quartz monzonite (?) with patches of limonite throughout.
CDC-16	203	Select	NA	Dump sample of bleached, silicified, iron oxide stained argillite and quartz monzonite. Some goethite also present.
CDC-17	203	Chip	3.0	Mylonitized quartz monzonite (?) at portal. Rock is silicified and contains limonite.
CDC-18	178	Grab	NA	Slightly bleached quartz monzonite
CDC-19	178	Chip	2.8	White gouge at portal of adit following N60W, 62SW shear zone. Adjoining rock is quartz monzonite.
CDC-20	178	Grab	NA	Highly fractured chloritic schist with some iron oxides.
CDC-21	178	Select	NA	Argillically altered and sheared quartz monzonite with minor iron oxides.
CDC-22	202	do	NA	Stockpile of quartz boxwork with iron oxide, pyrite and minor chalcopryrite and copper oxides.
CDC-23	202	do	NA	Sample of rock at portal which is silicified, argillic/sericitically altered quartz monzonite containing copper oxides and minor limonite.
CDC-24	202	Grab	NA	Silicified, argillic/sericitically altered quartz monzonite from dump.
CDC-25	202	Select	NA	Drill cuttings. Samples from bags containing white and tan quartz monzonite cuttings.
CDC-26	202	do	NA	Yellowish-green and black coated quartz pod within silicified, iron oxide stained quartz monzonite at portal of 18 ft adit.
CDC-27	178	Grab	NA	Silicified, argillic/sericitically altered quartz monzonite at 3 ft wide shear striking N60W, dipping 60SW. Sample from dump contains minor limonite.
CDC-28	181	Select	NA	Silicified granite with limonite and minor copper oxides.
CDC-29	180	do	NA	Chalcopryrite disseminated in gray quartzite with bornite and copper oxides from the dump.
CDC-30	180	do	NA	Granite/quartz monzonite with minor limonite stain from dump.
CDC-31	178	Grab	NA	Granite, minor chloritic alteration, with iron oxides.
CDC-32	180	do	NA	Sheared granite/quartz monzonite with minor limonite, calcite, and pyrolucite.
CDC-33	182	Select	NA	One in. thick quartz vein with iron oxides and disseminated pyrite within a N60E, 43SE, 3 ft thick shear
CDC-34	182	do	NA	Sample from 1 ton stockpile of quartz with minor boxwork and limonite coating.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CDC-35	182	do	NA	Quartz cemented breccia within argillically altered quartz monzonite. Diabase dike is 4 ft above and parallel to breccia that strikes N10W, dips 35E. There are coarse calcite pods, iron oxides, sphalerite, and minor malachite and cerussite (?) in breccia, along with sandstone clasts.
CDC-36	182	do	NA	Quartz from 3 ton stockpile contains galena, sphalerite, goethite, copper oxides and pyrolucite. Breccia zone in outcrop is same strike as sample 35 and part of same fault.
CDC-37	179	Chip	5.7	Slightly limonite stained, talcose quartz monzonite/granite. Sample across shear striking N25W, dipping 55SW.
CDC-38	179	do	4.5	do.
CDC-39	179	Select	NA	Granite with cerussite, iron oxides, and minor malachite.
CDC-40	177	do	NA	Siliceous iron skarn with copper oxides from stockpile.
CDC-41	177	do	NA	High grade copper oxides with some dolomite and siliceous iron oxides from dump.
CDC-42	177	do	NA	Quartz and calcite containing chalcopryrite, sphalerite, pyrite and/or marcasite, and arsenopyrite from dump.
CDC-43	177	do	NA	Granitic rock near contact with carbonate rock. Contact may be a N trending, W dipping shear. Sample is heavily iron oxide stained granitic.
CDC-44	177	do	NA	Dump sample of dolomite with copper oxides, chalcopryrite, cerussite, sphalerite, and chalcocite (?).
CDC-45	177	Grab	NA	Green phyllite with minor calcite and limonite.
CDC-46	177	Select	NA	Silicified, brecciated, iron oxide coated kaolinized granitic with, copper oxides, tetrahedrite, galena, siderite, and calcite. Ore minerals are in quartz. Chalcopryrite, sphalerite, and gold may also be present.
CDC-47	148	do	NA	Sample from dump of garnetiferous gneiss.
CDC-48	148	Chip	5.0	Sample across N5W shear, dip unknown containing limonite stained gneiss.
CDC-49	158	Select	NA	Limonite-coated boxwork quartz from dump with sphalerite, galena and cerussite. Country rock is garnetiferous gneiss.
CDC-50	158	do	NA	Same as sample 49, but from outcrop.
CDC-51	156	do	NA	Sample from dump of prospect pit. Quartz in gneiss with black coating that is extremely radioactive.
CDC-52	156	do	NA	Syenite at collar of drill hole.
CDC-53	157	do	NA	Dump sample of quartz in silicified granite containing galena, chalcopryrite, and sphalerite.
CDC-54	157	do	NA	Heavily limonite coated granitic rock from dump.
CDC-55	157	do	NA	Limonite stained granitic rock with quartz containing copper oxides and galena from dump.



Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CDC-56	176	do	NA	Iron skarn from dump with garnet, amphibole, chalcopyrite, and copper oxides.
CDC-57	176	do	NA	Dump sample of limestone containing copper oxides, iron oxides, and specular hematite.
CDC-58	176	do	NA	Same as 57.
CDC-59	176	do	NA	White marble, dolomitic limestone.
CDC-60	176	do	NA	Clinkery gossan with copper oxides and minor cerussite from dump.
CDC-61	176	do	NA	Barite with intermixed calcite from dump.
CDC-62	175	do	NA	Brilliant white magnesite, both massive and granular from dump.
CDC-63	176	do	NA	Copper oxide coated iron skarn with books of chlorite and some amphibole, and endoskarn from dump.
CDC-64	163	Grab	NA	Iron oxide stained granite.
CDC-65	163	do	NA	Sample of skarn outcrops, mostly hard siliceous, at contact with fine grained granite.
CDC-66	175	Chip	0.9	Magnesite vein in tan dolomite.
CDC-67	175	do	2.3	do.
CDC-68	163	Select	NA	Siliceous iron skarn and endoskarn with chalcopyrite and copper oxides near contact of dolomite with diorite.
CDC-69	163	do	NA	Copper oxides and dolomite with some serpentine from dump.
CDC-70	163	do	NA	Sphalerite, chalcopyrite and copper oxides in sheared contact between skarn and dolomite.
CDC-71	163	do	NA	White dolomitic marble.
CDC-72	163	do	NA	Copper oxides in dolomite from dump.
CDC-73	163	do	NA	Chalcopyrite and copper oxides in dolomite.
CDC-74	163	Chip	5.0	N10W, 11W shear zone at dolomite-skarn contact contains minor copper oxides and iron oxides.
CDC-75	175	Select	NA	Dump sample of white magnesite.
CDC-76	162	Grab	NA	Brown, silicified limestone breccia.
CDC-77	161	Select	NA	Small pod of iron oxides and pyrite in siliceous dolomite.
CDC-78	162	do	NA	Sample of carbonate rock with massive copper oxides, chalcopyrite, hematite and jasperoid.
CDC-79	163	do	NA	Massive copper oxides and minor limonite in thinly laminated dolomite.
CDC-80	163	do	NA	Sample of massive copper oxides above portal. Dolomite is faulted N50E, dipping 80SE. with mineralization in fault.
CDC-81	163	Grab	NA	Sample of dump of Anchor Shaft. Mostly fines with some copper oxide coated dolomite.
CDC-82	163	Select	NA	Copper oxide coated dolomite from dump.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CDC-83	164	do	NA	Sphalerite and copper oxides with limonite and dolomite from dump.
CDC-84	164	do	NA	Sphalerite, copper oxide, cerrusite and iron oxides in silicified brecciated dolomite from dump.
CDC-85	164	Chip	1.0	Diabase dike with copper oxides, epidote, and limonite near contact with dolomite.
CDC-86	164	Select	NA	Massive galena, sphalerite, pyrite, and iron oxides in silicified gray dolomite with coarse calcite from dump.
CDC-87	164	Grab	NA	N10E, 75W shear zone with silicified brecciated dolomite containing galena, cerrusite, and minor copper oxides.
CDC-88	164	Select	NA	Quartz with disseminated chalcopryite, copper oxides, and cerrusite from stockpile. Host rock is gneiss.
CDC-89	164	Grab	NA	Sheared, limonite stained dolomite and calcareous gouge in N45W, 90 fault parallel to bedding.
CDC-90	164	do	NA	Pyrite and hematite-bearing pod in dolomite.
CDC-91	164	Select	NA	Copper oxide stained brecciated dolomite from dump contains galena, sphalerite, cerrusite, and chalcocite (?).
CDC-92	164	do	NA	Fine disseminated chalcopryite and galena, and sphalerite in silicified dolomite from dump.
CDC-93	209	Random	NA	Limonite stained granite/quartz monzonite.
CDC-94	201	do	NA	Bull quartz pod in granite/quartz monzonite.
CDC-95	201	do	NA	Granite/quartz monzonite from dump.
CDC-96	201	do	NA	Granite/quartz monzonite.
CDC-97	197	do	NA	Minor iron oxide stain in granite from dump.
CDC-98	197	do	NA	Minor iron oxide in quartz monzonite.
CDC-99	197	Select	NA	Limonite stained quartz from dump at sheared quartz monzonite with minor galena. Shear is N85E, 45 S.
CDC-100	197	Grab	NA	Same as sample 98.
CDC-101	200	Select	NA	Calcareous magnetite-rich schist pod within quartz monzonite contains sphalerite, cerrusite, and minor copper oxides.
CDC-102	200	do	NA	Quartz with minor copper oxides and iron oxides from dump. Host rock is quartz monzonite.
CDC-103	200	Grab	NA	Quartz monzonite.
CDC-104	199	do	NA	Specular hematite in iron oxide stained granite/quartz monzonite from dump.
CDC-105	198	Select	NA	Quartz with iron oxides from dump. Quartz monzonite host rock.
CDC-106	198	do	NA	Quartz in quartz monzonite with cerrusite, sphalerite, minor copper oxides, and much iron oxides.
CDC-107	198	Grab	NA	Granodiorite.
CDC-108	198	do	NA	Propylitically altered and sheared granitic rock.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CDC-109	196	Select	NA	Epidote-garnet skarn with copper oxides, quartz, serpentine, wollastonite, and magnetite.
CDC-110	196	Grab	NA	Granite/quartz monzonite from dump.
CDC-111	196	Select	NA	Copper oxides disseminated in granite/quartz monzonite.
CDC-112	209	Grab	NA	Iron oxide stained granite/quartz monzonite.
CDC-113	196	do	NA	Granite/quartz monzonite from dump.
CDC-114	196	Select	NA	Magnetite-rich epidote-garnet skarn in limestone contains copper oxides. Sample from dump.
CDC-115	196	do	NA	do.
CDC-116	196	do	NA	White dolomitic marble from dump.
CDC-117	195	Select	NA	Chalcopyrite, copper oxides, and magnetite at contact between limestone/dolomite and quartz monzonite.
CDC-118	195	Grab	NA	Quartz monzonite from dump.
CDC-119	195	do	NA	Iron oxide coated granodiorite.
CDC-120	195	do	NA	White dolomite marble.
CDC-121	195	do	NA	White limestone marble.
CDC-122	195	Chip	2.0	Iron oxide stained, sheared quartz monzonite.
CDC-123	194	Grab	NA	Limonite stained quartz monzonite from dump.
CDC-124	194	do	NA	Epidote-garnet skarn with quartz, sphalerite, copper oxides, and iron oxides within dolomite.
CDC-125	194	Select	NA	Epidote-garnet skarn with copper oxides and calcite from dump.
CDC-126	194	do	NA	Siliceous iron gossan from dump.
CDC-127	194	do	NA	Epidote skarn with chalcopyrite, copper oxides, calcite, silica, and iron oxides from dump.
CDC-128	194	Grab	NA	Limestone and dolomite from dump.
CDC-129	194	Select	NA	Epidote skarn pod in contact with quartz monzonite and dolomite. Sample from dump of copper oxides with magnetite, calcite, quartz, and iron oxides. Also present are serpentine, green mica, and asbestos.
CDC-130	194	Grab	NA	White dolomitic marble.
CDC-131	193	do	NA	do. from dump.
CDC-132	193	Select	NA	Copper oxide coated dolomite with magnetite, hematite, cassiterite, and chalcocite (?).
CDC-133	193	do	NA	Limestone from dump containing scheelite, hematite, malachite, diopside, garnet, green mica, and cassiterite.
CDC-134	193	do	NA	Chalcopyrite in a pyroxene-rich skarn with dolomite. Iron oxides, copper oxides, chalcocite, and cassiterite are present.
CDC-135	193	Grab	NA	White dolomitic marble from dump.
CDC-136	193	do	NA	White dolomitic marble.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CDC-137	192	do	NA	Same as 135.
CDC-138	192	Select	NA	Chalcopyrite, covellite, chalcocite, and copper oxides with dolomite from dump.
CDC-139	192	do	NA	Copper oxides and minor chalcopyrite in dolomite with epidote and garnet.
CDC-140	192	do	NA	Sphalerite, galena and cerrusite in dolomite.
CDC-141	190	do	NA	Copper oxides, chalcocite, and cerrusite in dolomite.
CDC-142	190	do	NA	Calcite, sphalerite, cerrusite and iron oxides in gray dolomite.
CDC-143	190	do	NA	Epidote-garnet skarn with magnetite, minor chalcopyrite and copper oxides, iron oxides and calcite.
CDC-144	190	do	NA	Copper oxides and minor chalcopyrite in dolomite from dump.
CDC-145	190	Grab	NA	Slightly dolomitic limestone marble.
CDC-146	190	Select	NA	N65E, 31NW. fault in dolomite has skarn containing copper oxides and minor cerrusite.
CDC-147	190	do	NA	Dolomite with magnetite, copper oxides, and chalcocite.
CDC-148	189	Chip	1.5	N40W, 90 fault with 18 in. thick quartz vein containing iron oxides. Host rock is granite/quartz monzonite.
CDC-149	190	Select	NA	Sample from dump of dolomite with copper oxides and magnetite.
CDC-150	190	do	NA	do.
CDC-151	195	Grab	NA	Quartz float on quartz monzonite.
CDC-152	195	Chip	3.5	N75W, 70NE fault gouge with limonite and epidote in granite/quartz monzonite
CDC-153	191	Grab	NA	White dolomitic marble.
CDC-154	190	Select	NA	N40E, 56NW. contact between dolomite and quartz monzonite. Epidote-garnet skarn with chalcopyrite, magnetite, copper oxides, serpentine and limonite.
CDC-155	188	Grab	NA	Slightly silicified granite/quartz monzonite.
CDC-156	188	do	NA	Garnet-epidote skarn pod with sphalerite is about 15 ft diameter in quartz monzonite.
CDC-157	185	Select	NA	Vuggy quartz with iron oxides and minor copper oxides from dump.
CDC-158	185	do	NA	Limonite gossan in quartz within silicified granite.
CDC-159	187	do	NA	Pyrite, marcasite (?), and hematite in quartz from stockpile. In workings quartz vein is a contact of lamprophyre dikes with granite/quartz monzonite.
CDC-160	187	do	NA	N40W, 36SE. quartz vein, up to 2 ft thick, contains pyrite, marcasite (?) and iron oxides. Sample from dump and outcrop.
CDC-161	186	do	NA	Fractured, vuggy granite with galena, cerrusite, and calcite.



Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CDC-162	186	Grab	NA	Fractured granite with minor calcite, quartz, limonite, and cerrusite.
CDC-163	186	Select	NA	Sample from dump of vuggy quartz with massive pyrite and iron oxides in granite.
CDC-164	186	Grab	NA	N20E, 44E lamprophyre dike in quartz monzonite at portal.
CDC-165	186	Select	NA	Sericitically altered, silicified, and iron oxide stained granite/quartz monzonite with pyrite and minor copper oxides.
CDC-166	184	Chip	2.5	S5W, 72E fault followed by adit contains brecciated granite with iron oxide stain. Sample across portal.
CDC-167	184	Select	NA	Brecciated granite with pyrite from dump at sample site 166.
CDC-168	184	Chip	2.3	N75W, 64S shear in trench. Fine grained granite/quartz monzonite with 7 in. gouge and 1/2 in. quartz veinlet.
CDC-169	184	Select	NA	Silicified, sericitically altered granite/quartz monzonite. Sample from dump contains much pyrite and limonite, and minor jasperoid.
CDC-170	140	do	NA	Quartz and limonite in granitic rock from stockpile at prospect pit. Lamprophyre dike exposed in pit.
CDC-171	183	Chip	2.5	Brecciated granite/quartz monzonite. Fault strikes N10E, dips 46E
CDC-172	174	Grab	NA	Sample from dump of silicified, sericitically altered granite/quartz monzonite with minor pyrite and iron oxides.
CDC-173	173	Select	NA	Copper oxide coated, iron oxide-rich jasperoid in dolomite with magnetite and coarse calcite from dump. Vein strikes N10W and dips 90.
CDC-174	173	do	NA	Copper oxides with magnetite and calcite in N44W, 72NE. fault in dolomite. Fault up to 25 ft wide.
CDC-175	173	do	NA	Endoskarn in monzonite with minor copper oxides.
CDC-176	165	do	NA	Sample from dump of galena, magnetite, and iron oxides in granite/quartz monzonite which contains epidote, chlorite, and sericite (?).
CDC-177	165	Grab	NA	Highly fractured, iron oxide stained, silicified, sericitically altered granite/quartz monzonite.
CDC-178	165	Chip	5.0	Sericitically altered and sheared granite/quartz monzonite with iron oxides throughout.
CDC-179	151	Grab	NA	Iron oxide stained granite/quartz monzonite.
CDC-180	151	do	NA	do.
CDC-181	152	Select	NA	Iron oxide and cerrusite with minor jasperoid and dolomite from dump. Working is on N50 E, 55NW. shear in dolomite.
CDC-182	152	do	NA	Sample of quartz with purple fluorite from dump. Vein is in S70W, 46N shear zone.
CDC-183	153	chip	3.7	N60 W, 30SW. fault with calcareous yellow to white gouge and minor copper oxides. Dump sample contains chalcopyrite and iron oxides in carbonate.
CDC-184	155	Grab	NA	Dump sample of quartzite cemented by jasper, limestone

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
				cemented by jasper, and granite/quartz monzonite that is limonite stained and highly fractured.
CDC-185	155	do	NA	Granite/quartz monzonite at portal, which underlies dolomite. Same site as 184.
CDC-186	154	Select	NA	Sample of stockpile at caved shaft in limestone host of copper oxides, covellite, chalcocite in quartz and jasperoid.
CEM-1	653	Grab	NA	Hematite-stained rhyolite dike in siltstone.
CEM-2	401	Grab	NA	Stockpile of specular and massive hematite.
CEM-3	403	Chip	14.5	Sheared contact of limestone with overlying quartzite.
CEM-4	402	Grab	NA	Breccia zone along limestone/quartzite contact contains secondary copper minerals.
CEM-5	402	Chip	3.7	Shear zone in thinly bedded quartzite.
CEM-6	402	Chip	3.2	Three quartz veins in quartzite contain small amounts of pyrite.
CEM-7	396	Grab	NA	Quartz vein in pegmatite contains pyrite.
CEM-8	396	Grab	NA	Shear zone in granite and granite pegmatite contains secondary copper minerals.
CEM-9	400	Grab	NA	Fine-grained magnesian limestone, minor contact metasomatism.
CEM-10	396	Chip	1.2	Limonitic quartz vein in granitoid rock.
CEM-11	396	Chip	4.5	Two quartz veins 3 ft apart in granitoid rock.
CEM-12	399	Chip	6.0	Sheared contact of thinly bedded quartzite and shale with overlying dolomite.
CEM-13	399	Chip	42	Fault zone in thinly bedded quartzite and shale.
CEM-14	399	Chip	25	Do (continuation of CEM13).
CEM-15	398	Grab	NA	Two pyrite-bearing quartz veins, 3 and 6 ft thick, in quartzite.
CEM-16	398	Grab	NA	Brecciated quartz vein in quartzite, 1 to 3 ft thick; contains secondary copper minerals.
CEM-17	398	Chip	3.0	Brecciated quartz lens in quartzite.
CEM-18	397	Chip	6	Sheared contact of quartzite with overlying dolomite.
CEM-19	397	Grab	NA	Sheared contact of quartzite with overlying dolomite.
CEM-20	394	Select	NA	Earthy to jasperoidal hematite in shear zone.
CEM-21	395	Grab	NA	Shear zone along quartzite/dolomite contact.
CEM-22	394	Chip	7	Limonitic shear zone in quartzite.
CEM-23	394	Chip	8	Siliceous, hematitic breccia zone along siltstone/dolomite contact.
CEM-24	393	Grab	NA	Shear zone in quartzite, 6 ft thick contains quartz veins to 0.8 ft thick.
CEM-25	371	Chip	1.2	Hematitic shear zone in limestone contains secondary copper minerals.
CEM-26	371	Select	NA	Iron- and copper-stained limestone from shear zone.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CEM-27	371	Chip	20	Magnetite-epidote skarn zone in marble.
CEM-28	392	Grab	NA	Quartz veins as much as 2 ft thick from a shear zone in granitoid and pegmatitic rocks.
CJO-1	381	Grab	NA	Milky quartz and altered feldspar.
CJO-2	382	Grab	NA	Quartz with copper silicates and minor sulfides.
CJO-3	388	Grab	NA	Iron-oxide stained quartz with with pyrite, galena, chrysocolla, and sphalerite.
CJO-4	387	Grab	NA	Silicified, iron-oxide stained, altered granitic rocks.
CJO-5	389	Grab	NA	Iron-oxide stained quartz.
CJO-6	386	Grab	NA	Iron-oxide stained quartz with copper silicate and minor disseminated pyrite.
CJO-7	390	Grab	NA	Milky quartz with galena, pyrite, and chalcopyrite.
CJO-8	380	Chip	2.0	Milky quartz with red-pink feldspar and minor mica.
CJO-9	379	Grab	NA	Iron-oxide stained silicified granitic rocks.
CJO-10	383	Grab	NA	Iron-oxide stained quartz with minor disseminated sulfides.
CJO-11	384	Grab	NA	Iron-oxide stained milky quartz with minor disseminated pyrite.
CJO-12	385	Chip	12.0	Dark green dike and gray granitic rocks with quartz breccia and fault gouge.
CJO-13	391	Grab	NA	Massive green copper carbonate in garnet bearing tactite.
CJO-14	432	Grab	NA	White to tan silicified granitic rocks.
CJO-15	433	Grab	NA	Iron-oxide stained quartz.
CJO-16	433	Random chip	NA	Bleached granitic rocks and fault gouge.
CJO-17	435	Grab	NA	Iron-oxide stained quartz with disseminated pyrite.
CJO-18	439	Grab	NA	Quartz and silicified breccia with minor copper silicate and oxidized pyrite.
CJO-19	438	Random chip	NA	Silicified limestone and granitic rocks with with disseminated copper carbonates.
CJO-20	437	Grab	NA	Milky quartz with 1-2% green copper silicate and minor pyrite.
CJO-21	572	Grab	NA	Dark green, fine grained intrusive rock and milky quartz.
CJO-22	571	Grab	NA	Dark green, fine grained intrusive rock with pyrite, chalcopyrite and limonite; and quartz with copper silicate along fractures.
CJO-23	570	Grab	NA	Quartz and dark green, fine grained intrusive rock with minor disseminated pyrite and iron-oxide staining.
CJO-24	569	Grab	NA	Altered granitic rock.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CJO-25	431	Grab	NA	Quartz and gray silicified granitic rocks with pyrite, limonite and copper carbonate.
CJO-26	434	Grab	NA	Iron-oxide stained milky quartz with copper silicate, chalcopyrite, and azurite.
CJO-27	434	Grab	NA	Same material as CJO-26 with disseminated pyrite.
CJO-28	436	Random chip	NA	Sheared, altered granitic rocks.
CJO-29	430	Random chip	NA	Sheared granitic rocks and fault gouge.
CJO-30	428	Grab	NA	Silicified granitic rocks with sericitic and chloritic alteration; Altered rhyolite and quartz with pyrite and minor fluorite.
CJO-31	429	Grab	NA	Silicified granitic rocks with minor copper silicate along fractures.
CJO-32	574	Grab	NA	Quartz with massive pyrite and limonite boxwork.
CJO-33	573	Grab	NA	Iron-oxide stained milky quartz.
CJO-34	427	Grab	NA	Quartz, rhyolite and coarse grained granitic rocks with pyrite and minor dark gray sulfides(?) in fractures.
CMH-1	698	Grab	NA	White to light gray coarse crystalline dolomite.
CMH-2	698	Grab	NA	Dolomite with minor epidote at contact with granitic rocks.
CMH-3	699	Grab	NA	Ash flow tuff with pumice clasts up to 8 inches in diameter.
CMH-4	697	Grab	NA	do
CMH-5	695	Grab	NA	Black vitrophyric perlite with thin rhyolite interbeds.
CMH-6	695	Grab	NA	do
CMH-10	696	Grab	NA	Bright red tuff breccia.
CMH-11	696	Grab	NA	Chalcedony float in tuff breccia.
CMH-12	696	Grab	NA	Red vesicular quartz and altered foliated, decomposed basalt.
CMH-13	696	Grab	NA	Tuff breccia with vesicular basalt clasts.
CMH-14	696	Grab	NA	Silicified tuff and basalt pebble breccia.
CMM-1-A	111	Grab	NA	Black, glassy scoraceous slag.
CMM-1-B	111	Grab	NA	Limonitic, weathered, pyrite-rich, copper carbonate stained sheared dolostone.
CMM-1-C	111	Grab	NA	Limonitic, copper-carbonate stained, intensely weathered, sheared dolostone.
CMM-1-D	111	Grab	NA	Limonitic, copper-carbonate stained, intensely weathered, sheared dolostone.



Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CMM-2-A	003	Chip	3.0	Sheared zone in gray dolostone. Strike of sheared zone is N65E and dip 70NW. The sheared zone is mineralized by limonite and copper carbonates.
CMM-2-B	003	Grab	NA	Sheared contact of dolostone and quartzite with schist and gneiss is mineralized by limonite and copper carbonates. The mineralized zone is contorted but is subconcordant to bedding and schistosity and is crosscut by narrower limonitic veins.
CMM-2-C	003	Grab	NA	Limonitic gossan, black and glossy, in stockpile.
CMM-2-D	003	Grab	NA	Radioactive limonitic gossan selected from dump.
CMM-2-E	003	Grab	NA	Limonitic gossan, vuggy, red-brown, selected from dump.
CMM-2-F	003	Grab	NA	Sheared, limonite- and copper carbonate-stained dolostone from stockpile. The mineralized zone is about 1.5 ft thick and is low-angle with strike N20E with and dip 30NW. Mineralized zone is along a contact of dolostone overlying schist, but has spread out from a high-angle structure trending N50E
CMM-3-A	070	Grab	NA	Sheared lenticular quartz vein striking N10E and dipping 45NW semiconcordantly in gray quartzose shale and schist. The quartz vein, which is about two ft thick and probably continuous at least 400 ft, may extend several thousand ft. The vein contains vuggy quartz with moderate limonitic staining, calcite, barite(?) and white feldspar.
CMM-3-B	070	Grab	NA	Limonitic quartz vein with numerous limonitic vugs and about 5 percent black metallic minerals.
CMM-3-C	070	Chip	2.4	Limonitic schistose quartzite with about 5 percent pyritic vugs as large as 0.125 in. Strike of schistosity is N30E and dip is contorted but nearly vertical.
CMM-4-A	072	Grab	NA	Limonitic, vuggy, sheared, drusy, dolostone with streaks of black sulfides(?).
CMM-4-B	072	Grab	NA	Brown band in gray and white dolostone, subparallel to bedding. Strike is N10W and dip is 55SW. Outcrop mined by open stoping, room and pillar, and inclined shaft.
CMM-4-C	072	Grab	NA	Limonitic, vuggy, drusy, sheared brecciated dolostone with galena and sphalerite, about 15 percent of each. Stockpile is about 10 ft by 5 ft by 4 ft.
CMM-4-D	072	Grab	NA	Brown, fine-grained, sheared, brecciated, drusy dolostone with sphalerite(?); strike of mineralized band is N5W and dip is 55SW. Mined by open stope, stilled room and pillar. Adit about 50 ft below is in sheared, limy argillite about 7 ft thick, an apparent major, nearly horizontal thrust fault.
CMM-5-C	073	Chip	2.3	Limonitic, brown, sheared, brecciated dolostone band about 5 ft thick with an estimated 5-10 percent pyrite, galena, sphalerite, and bornite. Trend is subparallel to bedding, N35W and dip is 35NE.
CMM-5-D	073	Chip	5.0	Sheared, brecciated, limonitic, gouge-rich brown zone parallel to bedding in gray and white dolostone. The zone contains an estimated 5-10 percent pyrite, galena, sphalerite, and bornite. Strike is N60W and dip is 26NE. Stopped along inclined shaft.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CMM-7-A	071	Grab	NA	Limonite and copper carbonate stained, galena-bearing, quartzose, brecciated, sheared granodiorite(?) off stockpile on dump. The mineralized zone strikes N45E and dips 65NW; it is about 6 ft thick.
CMM-8-A	055	Grab	NA	Limonitic, sheared, silicified granitic rock on dump of main shaft.
CMM-8-B	055	Grab	NA	Sheared, brecciated, limonitic, vuggy, silicified, chalcedonic granitic rock. Strike of mineralized zone is EW and dip is 85SW. Country rock is argillized, limonitic granodiorite(?).
CMM-8-C	055	Chip	NA	Sheared, brecciated, silicic, argillic zone, about 50 ft thick, striking N85E and dipping 80NW in limonitic granitics. A subparallel diorite dike crops out about 75 ft northeast.
CMM-8-E	058	Grab	NA	Limonitic, vuggy, sheared, fractured, silicified granitic rock near simple granitic pegmatite dikes. The mineralized zone is contorted but trends N35W near vertical.
CMM-8-F	058	Grab	NA	Sheared, limonitic, vuggy, silicified granodiorite(?); simple granitic pegmatite dikes crop out nearby.
CMM-8-G	058	Grab	NA	Limonitic, gneissose granitic rock with a few silicified zones.
CMM-8-H	061	Grab	NA	Limonitic granodiorite, partly silicified, with nearby outcrops of biotite schist, biotite gneiss, diorite, pink granite, and simple pegmatites.
CMM-8-I	059	Grab	NA	Silicified, limonitic, argillized granodiorite(?).
CMM-8-J	059	Grab	NA	Silicified, argillized, limonitic, granitic rocks with pegmatites. 2 foot intensely fractured zone trending N55W dipping 57SW.
CMM-8-K	059	Grab	NA	Sheared zone, four ft wide, in quartz monzonite, granodiorite, pegmatites; silicified, limonitic, strikes N35W, dips 73SW.
CMM-8-L	059	Grab	NA	Brecciated granite, sheared, limonitic, argillic, with about 30% quartz, 20% black mineral, massive, dull.
CMM-8-N	056	Grab	NA	Silicified granodiorite, argillic, limonitic, with black staining, sheared.
CMM-8-O	056	Grab	NA	Granodiorite (?), limonitic, argillic, from dozer scrapping.
CMM-8-P	060	Grab	NA	Granodiorite, silicic, limonitic; diorite, pegmatite, schist, and gneiss.
CMM-8-Q	061	Grab	NA	Granodiorite, silicic, limonitic; diorite, pegmatite, schist, and gneiss.
CMM-8-R	062	Chip	2.0	Dike, vertical, N55W, silicified, limonitic, argillic, with masses of fluorite, barite, sheared schist, gneiss to the south, granite pegmatite to the north.
CMM-8-S	063	Grab	NA	Major fault zone, at least 100 ft wide, trending N70W, vertical, limonitic, argillized; quartz, chalcedonic, vuggy; cross-cut by quartz veins.
CMM-8-T	057	Grab	NA	Schist and gneiss, brecciated, sheared, silicified, limonitic; trends N63W, dips 78SW.; up to six ft wide; shaft is more than 75 ft deep.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CMM-8-U	057	Grab	NA	Same zone as at MM-8-T.
CMM-8-V	050	Grab	NA	Silicified zone, N75W, dipping 65SW, sheared, limonitic, in quartzite, about two ft wide; adit more than 30 ft long.
CMM-8-W	055	Grab	NA	Diorite sill, black, with fine to medium crystalline basalt, in granite; upper contact sharp, N40E, dipping 15NW., at least 15 ft thick, Mo oxides (?).
CMM-8-X	055	Grab	NA	Silicified zone in granitic rock, sheared, 1 ft wide, N75E, 63SE.; short adit, another possibly caved.
CMM-8-Y	056	Grab	NA	Granitic rock, medium-grained, gray, silicic, sericitic.
CMM-9-A	052	Grab	NA	Dolostone, black stained, sheared, limonitic, argillic, brecciated; vuggy zones subparallel to bedding, in zone 20 ft wide, trending N and dipping 35W
CMM-9-B	052	Grab	NA	Dolostone, brecciated, sheared, vuggy, limonitic, with cerussite, anglesite, and sphalerite, subparallel to bedding; zone is at least 15 ft wide; N15W, 40SW.
CMM-9-C	052	Grab	NA	Dolostone, gray, massive, brecciated, sheared, limonitic, vuggy, striking N15W, dipping 40SW.; areas of brecciation filled by travertine, calcite/dolomite; numerous caves.
CMM-9-D	053	Grab	NA	Sheared, brecciated, limonitic, vuggy zone four ft wide subparallel to bedding of surrounding gray carbonates which strike N5W and dip 60SW.
CMM-10-D	048	Grab	NA	Schist and gneiss, sheared, silicified, vuggy, drusy, limonitic, in quartz vein about 3/4 ft thick; trends N33W, dips 83NE.
CMM-10-E	048	Grab	NA	Gneiss(?), gray-green to slightly pink, medium grained, fractured and broken, with iron oxide, weak to moderate and manganese trace to weak on fractures, adjacent to fault, striking N55W, dipping about 80SW.; fault has quartz veins.
CMM-10-F	054	Grab	NA	Gneiss, white to gray, fine to medium grained, fractured to broken to shattered, bleached and altered to sericite with silification, weak; manganese oxide on fractures.
CMM-10-G	054	Grab	NA	Dolostone, gray, massive, friable, sandy; strikes N5W, dips 50SW., small white veinlets; limestone weathers to 1/4 to one in. chunks.
CMM-10-H	047	Random Chip	NA	Gneiss, gray-white, medium grained, fractured to broken to shattered, with iron oxide after pyrite weak to moderate and manganese oxide on fractures; sericite with quartz veins and flooding, disseminated mineralization near silicified areas.
CMM-10-I	047	Grab	NA	Granitic rock, sheared, limonitic, black stained, vuggy, drusy, shearing N75E, vertical, one to three ft wide; wolframite.
CMM-10-J	045	Grab	NA	Shear zone, about 0.5 ft thick, striking N35W, dipping 90, containing masses of blue and white fluorite up to six in. thick in dolostone, gray, massive, striking E-W, dipping 25 N.; limonite with sericite and argillic alteration.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CMM-10-K	045	Grab	NA	Purple and green fluorite from footwall of N40W, 25SW fault; also note quartz veins, white, opaque in dolostone, black to dark gray, fine crystalline, medium to thick bedded, silicified, fractured to broken to shattered.
CMM-10-L	045	Chip	6.5	Sheared, limonitic, fluorite veined zone with copper oxide staining; strikes N80W, dips 25 to 45NE. in gray dolostone; E-W striations, dipping 25 S., last movement to the S(?).
CMM-10-M	045	Grab	NA	Dolostone, gray, sheared, brecciated, with limonite, copper oxide staining, diopside zone at least six in. thick, strikes N40E, dipping 48SE.
CMM-10-N	045	Grab	NA	Sheared contact of gray argillaceous dolostone and granitics(?) which strikes N60W and dips 35SW., black stained, slightly limonitic, silicified, with specular hematite, serpentine(?) and magnesite/brucite(?)
CMM-10-O	049	Chip	11.0	Schist, sericitic, argillized, foliation is N65W, vertical; from a pit dug to develop a spring.
CMM-10-P	049	Grab	NA	Quartz-carbonate ledge, N40W, 70NE., exposed in 15 ft by six ft by four ft trench, black and brown limonite noted; schist and gneiss sheared subparallel to bedding at head of trench.
CMM-10-Q	049	Grab	NA	Schist and gneiss, limonitic, sericitic, argillic, pegmatites. Trends N55W, dips 80NE.
CMM-10-S	049	Grab	NA	Quartz-carbonate, sheared, N50W, dipping 85SW., about 75 ft thick, in schist and gneiss, limonitic, vuggy, drusy.
CMM-10-T	033	Grab	NA	Dolostone, gray, bleached, limonite staining; 0-7-ft-wide shear zone, N75W, vertical, with veinlets of chrysocolla, malachite, and blebs of azurite in fractured limestone next to shear zone.
CMM-10-U	033	Grab	NA	Dolostone, gray, bleached, limonite staining; shear zone, N45W, vertical, with veinlets of chrysocolla, malachite, and blebs of azurite in fractured limestone next to shear zone.
CMM-10-V	033	Grab	NA	Shear zone striking N60E, dipping 40NW. containing azurite and malachite in silicified zones in gray dolostone; quartz and calcite veinlets up to 0.08 ft adjacent to shear zone.
CMM-10-W	033	Grab	NA	Shear zone 1-3 ft thick striking N25W and dipping 75NE in gray dolostone; shear zone is bleached, silicified with copper silicates, azurite; 15 ft shaft.
CMM-10-X	033	Grab	NA	Poorly exposed fluorite, purple, banded, botryoidal, sericitic. Fluorite exposed near crusher is about four ft thick and lies within a low angle shear zone, N15W, 35SW. in gray dolostone.
CMM-10-Y	033	Chip	4.3	Fluorite, gougy, argillic, silicic in a zone striking N20E, dipping 10-20NW. in gray dolostone.
CMM-10-Z	033	Grab	NA	Limonitic, copper stained, vuggy, drusy, and sheared mineralized zone one to two ft. thick striking N30W, dipping 70NE. in gray dolostone.



Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CMM-10-27	033	Grab	NA	Sheared zone striking N25W, dipping 30SW., containing siliceous, sheared, vuggy, brecciated, sericitic, limonitic carbonate at contact of dolostone layers.
CMM-10-28	033	Grab	NA	Gray, bleached, fractured dolostone with sericite, clay, quartz, and minor fluorite.
CMM-10-29	048	Grab	NA	Quartz vein, limonitic and vuggy, striking N80E and dipping 80SE. in limonitic schist and gneiss.
CMM-10-30	039	Grab	NA	Fenitized pegmatite containing fluorite, hematite, and sericite in granitic rock.
CMM-10-31	047	Chip	2.0	Limonitic, silicified, vuggy, sheared, brecciated zone striking EW. and dipping vertically in granitics. Zone has minor copper carbonate staining and contains small, hard, limonitic lenses with angular white grains.
CMM-10-32	047	Grab	NA	Fenitized, silicic, sericitic, limonitic, feldspar-rich zone about 3 ft thick striking N., nearly vertical, in limonitic schist and gneiss. Zone is weakly stained by copper carbonate and contains minor fluorite, azurite, and black blebs to 1/4 in.
CMM-10-33	046	Grab	NA	Quartz vein, 2-3 ft wide, sheared, with minor limonite, copper carbonates, in vuggy, gray to pale brown dolostone and quartzite(?). Quartz vein strikes N15W and dips 57SW.
CMM-10-34	046	Grab	NA	Micaceous (25% phlogopite identified by XRD), near-white, powdery, talcose(15%) shear zone in gray, massive dolostone.
CMM-10-35	046	Grab	NA	Sheared, silicified, limonitic, vuggy zone 0.4 ft thick with major copper carbonate staining subparallel to bedding in gray dolostone which strikes N20E and dips 45NW.
CMM-10-36	046	Grab	NA	Low angle shear, with fluorite, siliceous, sericitic, argillic, striking N35W dipping 55SW.; zone is greater than 10 ft thick, fluorite probably at base of structure, structure appears to be thicker at shaft.
CMM-10-37	046	Grab	NA	Massive vuggy vein with copper oxides, limonite in gray dolostone, in contact with schist and gneiss near shaft. Schist and gneiss limonitic, altered; may have high angle structure intersecting with low angle fault.
CMM-10-38	045	Grab	NA	Dolomite, contorted, sheared, slickensided, sericitized, argillized, with estimated 5 percent black shining blebs up to 1/8 in., also large black disseminations; red-weathering carbonate cemented breccia on dump.
CMM-10-39	034	Grab	NA	Five-foot-thick shear zone striking N50W, dipping 35SW., cemented by carbonate and silica with minor limonite and moderate copper carbonates in gray, fractured dolostone.
CMM-10-40	034	Grab	NA	Limonitic, silty, sandy, argillic, sericitic dolostone trending N60W, dipping 65SW.(foliation); some chalcidonic quartz veining along foliation.
CMM-10-41	033	Grab	NA	Dolostone, brecciated, sheared, with clay and copper mineralization in zone striking N30W, dipping 30NE.; at least two ft of iron stain, gouge, and brecciation.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CMM-10-42	033	Grab	NA	Drill cuttings, gray dolostone with no apparent mineralization
CMM-10-43	036	Grab	NA	Schist and granite, altered, iron stained, chloritized; near adit which follows a one-foot-thick shear zone striking N40E, dipping 60NW.; no visible mineralization; pegmatite and diorite dikes up to two ft thick near portal.
CMM-10-44	036	Grab	NA	Quartz vein, 0.9-to 1.7-ft- thick, striking N40W, dipping 30NE. in weathered, bleached granitic rock; quartz vein has malachite, azurite, galena(?), and tetrahedrite(?).
CMM-10-45	034	Grab	NA	Quartzite and carbonate, brown, brecciated, with medium grained matrix.
CMM-10-46	036	Chip	20	Granite(quartz monzonite?), altered, highly silicified, iron stained; site of old upper adit dump.
CMM-10-47	036	Grab	NA	Iron stained and silicified rock, from lowest of three workings, probably caved adit.
CMM-10-48	034	Grab	NA	Limestone, iron stained, siliceous, with quartz veinlets, and limestone, dark limonite stained, with drusy silica on fracture surfaces; no visible mineralization.
CMM-10-49	034	Grab	NA.	Quartzite(Prospect Mountain), massive, limonitic, hematite stained.
CMM-10-50	036	Grab	NA	Quartz monzonite, massive, limonitic, sericitic, silicified; at portal of short adit.
CMM-10-51	036	Grab	NA	Quartz monzonite, massive, minor limonite; in road cut.
CMM-11-A	091	Chip	2.5	Zone with 30 percent quartz vein sheets, limonitic, striking N30W, dipping 75SW. in granitics; 300 counts per second on scintillometer in places.
CMM-11-B	089	Chip	4.3	Sheared, silicified, limonitic granite gneiss and schist with less than 5 percent pyrite; free gold in quartz float nearby. Shear zone strikes N30E, dipping 55NW. 150 CPS on scintillometer.
CMM-11-C	090	Grab	NA	Magnetite tactite, limonitic, copper carbonates near contact of dolostone and schists and gneisses; stringers of magnetite along bedding in dolostone, N70E, 75SE.; note shear zone five ft thick striking N., dipping 50W
CMM-11-D	090	Grab	NA	Quartz vein, limonitic, copper oxide stained, magnetite, 1.5 ft thick; in foliation in marble striking E-W., dipping 85 S.
CMM-11-E	089	Grab	NA	Diorite(?), copper oxide stained, magnetite rich, in zone at least 20 ft thick, striking E-W., dipping S.
CMM-11-F	079	Chip	2.0	Dolostone marble, gray, fine grained, massive; several hundred ft thick, banding, mottling(dark gray), magnetite, biotite.
CMM-11-G	081	Grab	NA	Quartz monzonite, sheared, brecciated, green copper carbonate stained; at contact with dolostone.
CMM-11-H	081	Grab	NA	Quartz monzonite, blocky, silicic, limonitic.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CMM-11-I	077	Chip	0.5	Serpentinite, green, sheared, slickensided, along dike/dolostone contact, seven ft wide, striking N30W, 70SW.
CMM-11-J	077	Grab	NA	Dolostone, pale gray-tan, fine crystalline, massive, from adit dump.
CMM-11-K	077	Grab	NA	Shear-breccia zone, five to ten ft thick, striking N45W, 45SW., in dolostone, pale gray, associated with dark green dike and quartz monzonite dike; possible intersection of vertical dike/shear with 45 shear, with limonite, serpentine, copper carbonates.
CMM-11-L	077	Grab	NA	Quartz monzonite, gray, lightly limonitic, brown weathering.
CMM-11-M	093	Grab	NA	Dump sample, limonite gouge and silicified limonitic boxwork gouge; in marble and banded limestone.
CMM-11-N	093	Grab	NA	Dolostone, fine grained, silicified, iron stained; in dolostone, sheared, bleached, sericitic, and dolostone, dark gray massive.
CMM-11-O	093	Grab	NA	Intensely shattered zone, N80W, vertical, three to ten ft thick, subparallel to bedding, with copper, lead, zinc carbonates.
CMM-11-P	093	Random Chip	1.0	Dolostone, gray, intensely sheared, green and yellow stained; contorted zone at least 20 ft thick, subparallel to bedding.
CMM-11-Q	082	Grab	NA	Granodiorite, medium-grained, heavy limonite stain, minor fracture/shearing N60W, vertical, intensely weathered.
CMM-11-R	082	Grab	NA	Contact zone, N70W, vertical, five ft thick, heavily limonite stained, minor black and copper carbonates; between dolostone, pale gray to the north, and granodiorite, epidote rich to the south.
CMM-11-S	082	Grab	NA	Tactite zones(2) separated by marble, striking N75E, 60NW., intensely weathered, limonitic, copper carbonates, selenite, magnetite; pale dolostone to the north, granodiorite to the south.
CMM-11-T	082	Grab	NA	Tactite, sheared, limonitic, copper carbonate stained, trending N80E, 55SE., with granodiorite to the south, carbonate to the north.
CMM-11-U	082	Grab	NA	Tactite, green grossular, epidote, chlorite, trending N80W, 65NE., in granodiorite.
CMM-11-V	081	Grab	NA	Pale gray dolostone in dark gray dolostone, striking EW., dipping 55S.
CMM-11-W	081	Grab	NA	Intersecting zones, three to twelve ft wide, lenticular, sheared, contorted, discontinuous, in dolostone. Six-ft-wide zone strikes N35W, 40SW.; associated with quartz monzonite dikes or green porphyry dikes/basalt dikes; some copper staining noted.
CMM-11-27	082	Grab	NA	Shear zone, five ft thick, N40W, 45SW., 90% clay gouge, white and 10% fractured dolostone; 1/2 in. veinlets in shear zone with quartz and malachite and black sulfides; sample mostly quartz material.
CMM-11-28	082	Grab	NA	Shear zone in dolostone, with granitic dike, fine crystalline, epidote, quartz vein material on dump.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CMM-11-29	082	Grab	NA	Skarn, epidote, garnet, vesuvianite (74% tentatively identified by XRD) along contact between medium crystalline granite and dolostone; contact is N to N20W; skarn zone is 15 to 20 ft wide and 200 to 250 ft long.
CMM-11-30	092	Grab	NA	Tactite, sheared, dark, fine grained, at contact between dolostone and granite, trending E-W., dipping 60 N.; some magnetite.
CMM-11-31	092	Chip		Tactite, sheared, dark, fine grained, at contact between dolostone and granite, trending E-W., dipping 60 N.; some magnetite. Sample from tan limestone in pit wall.
CMM-11-32	092	Grab	NA	Quartz monzonite, gray, medium crystalline, heavy limonite; more gneissic closer to contact.
CMM-11-33	092	Grab	NA	Contact zone between gray dolostone and quartz monzonite, about five ft wide, striking N60W, dipping 80SW.; zone is sheared, brecciated, limonitic, with copper carbonates and magnetite.
CMM-11-35	078	Grab	NA	Skarn zone, trending N20W, with massive light green garnet (grossular?), between tan dolostone with copper staining and fine crystalline intrusive.
CMM-11-36	076	Grab	NA	Dump sample, granitics, moderately iron stained, no visible mineralization.
CMM-11-37	077	Grab	NA	Tactite, copper stained, limonitic gouge, from contact zone between dark gray, massive dolostone and earthy granitics, trending E-W.
CMM-11-38	079	Grab	NA	Dolostone, bleached, fractured, silicified along fractures, brecciated; fractures and breccia trend N80W, 15SW.; cut by low angle fault.
CMM-11-39	074	Grab	NA	Quartz vein, sheared, brecciated, vuggy, limonitic; occurs in the Carrara Formation (shaly carbonates).
CMM-11-40	083	Grab	NA	Skarn zone, green garnet, serpentine, trending N50W, 65SW., about 10 ft wide; surrounded by granodiorite, sheared, minor mica, limonite, copper staining.
CMM-11-41	075	Grab	NA	Shear zone, N20W, 70NE., heavily mineralized with chalcocite, azurite, limonite stained; dolostone to the W, granitics to the E.
CMM-11-42	075	Grab	NA	Sheared/brecciated zone, four ft wide, N10W, 45SW., carbonates above green diorite dike, near quartz monzonite contact; with magnetite, heavy limonite, copper carbonates; thulite(?) and serpentine (thin lenses in dolostone) nearby.
CMM-11-43	075	Grab	NA	Sheared zone, four to six ft wide, trending N10W, 75SW., limonite stained, copper carbonates, minor serpentine, trace of asbestos; dolostone contact to the west, granitics to the east.
CMM-11-44	076	Grab	NA	Quartz vein, four ft wide, 30 ft long, poorly exposed, lenticular, gash-type, with quartz monzonite fragments and pyrite cubes (2 percent) up to 1/2 in. in the quartz monzonite.
CMM-11-45	083	Grab	NA	Granodiorite, blocky, minor limonite staining, epidote veins and masses.



Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CMM-11-46	083	Grab	NA	Breccia zone, contorted, five ft wide, N55W, vertical, at contact of granodiorite and green porphyry dike, with heavy copper carbonate, and limonite staining. Bornite, malachite, cuprite and calc-silicate rock noted.
CMM-11-47	083	Grab	NA	Contact zone, five ft wide, N55W, 35SW., sheared, brecciated, gossany, magnetite-rich, heavily copper carbonate, limonite, and black oxide stained; between tan dolostone, and black biotite gneiss.
CMM-11-48	084	Grab	NA	Contact zone, contorted, heavy limonite, copper carbonates, black oxide staining; abundant pyrite and chalcopryrite. Between pale gray dolostone and green porphyry dike/granodiorite.
CMM-11-49	084	Grab	NA	Biotite gneiss, limonite stained, with pyrrhotite, pyrite, magnetite disseminated; contact of pale gray epidote carbonate and granodiorite N20W, 60SW.
CMM-11-50	084	Grab	NA	Contact zone, sheared, four ft wide, N60W, vertical with heavy limonite and copper carbonate stains; between pale dolostone and green porphyry dike/granodiorite.
CMM-11-51	084	Grab	NA	Sheared zone, greater than 50 ft wide, N25W, vertical, with limonite, and black oxide staining, copper carbonates, in granodiorite, with quartz eyes (5 percent); alteration is concentrated in three subparallel zones with epidote, muscovite/sericite heavy.
CMM-11-52	087	Grab	NA	Granodiorite, gray, medium-grained, fresh, minor limonite.
CMM-11-53	087	Grab	NA	Dolostone, pale gray, fine- to medium- grained fresh.
CMM-11-54	088	Grab	NA	Bedding shears, gray dolostone, heavy limonitic, quartz stringers, black staining; shears N10W, 05SW., 2.5ft wide; N70E, 30NE., two ft wide; N20E
CMM-11-55	085	Grab	NA	Massive gossan, limonitic, at least 20 ft thick.
CMM-11-56	085	Grab	NA	Dolostone, pale gray, minor limonite, heavily copper carbonate crusted, black oxide stained, vuggy; major tectonic zone, at least 30 ft thick, heavy brecciation, metasomatism produced skarn with garnet and serpentine.
CMM-11-57	085	Grab	NA	Green, waxy serpentine in tectonic breccia zone, contorted, N70W, 30-40SW.; pale limestone/dolostone below, and granodiorite above in main pit.
CMM-11-58	085	Grab	NA	Garnet rock, gray-green, intensely fractured and weathered, garnets up to 0.0625 ft.
CMM-11-59	086	Grab	NA	Quartz vein material, limonite and copper carbonates, vuggy; from intensely sheared, brecciated, limonitic zone in gray limestone/dolostone. Zone is about 15 ft wide, and trends N55E, 70SE.
CMM-11-60	086	Grab	NA	Tan dolostone, gray, laminar, striking N30E, 30SE.
CMM-11-61	086	Grab	NA	Shear zone, one to three ft wide, striking N55W, vertical; in carbonate, yellow, dense crystalline, contorted.
CMM-12-A	044	Grab	NA	1-ft to 3-ft-thick quartzose shear zone adjacent to a limonitic pegmatite dike. Zone trends N60W, nearly vertical.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CMM-12-B	044	Grab	NA	Brown, decomposed, micaceous biotite schist trends N35W, nearly vertical.
CMM-12-C	044	Grab	NA	Quartz, sheared, limonitic, vuggy zone in granitics. Zone strikes N60E and dips nearly vertical.
CMM-12-D	044	Grab	NA	Gray biotite schist, probably amphibolite, with minor limonite.
CMM-12-E	043	Grab	NA	Limonitic, argillic shear zone from 0.5 ft to 2 ft thick trends N10E, 40NW in quartz monzonite, schist, gneiss, and silicified dolomite.
CMM-12-F	043	Chip	3.4	13-ft-thick argillized, limonitic zone trends N10E, 55NW in quartz monzonite.
CMM-13-A	042	Chip	1.2	10-ft-thick argillized, silicified shear zone trends N60W, near vertical in granitic rock.
CMM-13-B	042	Chip	1.5	Sheared and brecciated tufa and wallrock trends N40W, near vertical.
CMM-13-C	042	Grab	NA	Quartz-rich pegmatite with minor limonite and books of contorted mica three inches thick and 0.15-.25 ft wide.
CMM-13-D	042	Grab	NA	Quartz- and feldspar-rich pegmatite about 10 ft thick and 100 ft long with about 10 percent mica, some in flat books as thick as 0.25 ft and as wide as a foot.
CMM-13-E	042	Grab	NA	Low angle shear breccia at N20E, 16SE with gray silicious gneiss and granite.
CMM-14-A	019	Grab	NA	Limonitic, copper oxide stained shear zone at N65W, 30NE in dolostone.
CMM-14-B	032	Chip	NA	2-ft-thick quartz vein in a shear zone at N80W, near vertical in dark grey dolostone with calcite veins.
CMM-14-C	032	Grab	NA	Quartz vein material up to 1 ft and dolostone with calcite veinlets and iron stain from dump. Quartz vein is as thick as 6 ft and strikes N75E and dips 60NW.
CMM-14-D	030	Grab	NA	Quartz vein material and silicified and bleached dolostone from dump. Quartz vein strikes N40W and dips 67NE.
CMM-14-E	030	Grab	NA	Limonite and copper carbonate stained quartz and bleached dolostone from dump.
CMM-14-G	032	Grab	NA	2-ft to 6-ft-thick silicified breccia zone at N80W, 55NE in gray dolostone.
CMM-14-H	032	Grab	NA	Breccia zones up to 1 ft with limonite and copper oxide stained quartz in dolostone.
CMM-14-I	032	Grab	NA	2-ft to 3-ft opalized breccia zone with limonite striking N10W with near vertical dip in gray massive dolostone.
CMM-14-J	032	Grab	NA	Irregular chalcedonic breccia zones with limonite in dolostone.
CMM-14-K	029	Grab	NA	Irregular, silicified, chalcedonic breccia zone with limonite and malachite stains in dolostone.
CMM-14-L	027	Grab	NA	Dark gray to black dolostone drill cuttings.
CMM-14-M	027	Grab	NA	Silicified, sheared dolostone with calcite veinlets in west-striking vertical zone about 2 ft wide.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CMM-14-N	031	Grab	NA	Silicified and brecciated dolostone with calcite veinlets from zone striking N45W and dipping 75NE.
CMM-14-O	031	Grab	NA	Brecciated dolostone with calcite and clay gouge along fractures and quartz vein material up to 0.1 ft.
CMM-14-P	031	Grab	NA	Altered dolostone with calcite, gouge, and limonite along fractures.
CMM-14-Q	019	Grab	NA	Silicified, limonite stained shear zone in dolostone.
CMM-14-R	032	Random Chip	NA	Light gray, fine grained, thick bedded dolostone.
CMM-14-S	027	Grab	NA	Irregular, silicified, 3- to 5-ft wide dolostone breccia, with limonite and copper carbonate stains, striking N45W and dipping 75NE.
CMM-14-T	027	Grab	NA	Silicified breccia with limonite and copper oxides in dolostone.
CMM-14-U	027	Grab	NA	Silicified breccia with copper carbonate and limonite in gray dolostone.
CMM-14-V	026	Grab	NA	Silicified shear zone with copper carbonate and limonite in gray dolostone.
CMM-14-W	026	Chip	1.0	Gray quartz pebble conglomerate, black shale, and quartzite at N20W, 85SW.
CMM-14-Y	027	Grab	NA	Silicious, brecciated dolostone and quartz vein material with iron oxide and black sulfide from dump.
CMM-14-Z	027	Grab	NA	Silicious dolostone with malachite coatings from dump.
CMM-14-27	027	Grab	NA	Dark gray dolostone with iron stain from dump.
CMM-14-28	025	Grab	NA	Dark gray dolostone from dump near S45W trending adit.
CMM-14-29	025	Grab	NA	Silicified, iron stained dolostone from dump.
CMM-14-30	025	Grab	NA	Silicious, iron stained, brecciated dolostone from dump.
CMM-14-31	027	Grab	NA	Brecciated dolostone and quartz vein material with malachite from dump.
CMM-14-32	027	Grab	NA	Brecciated dolostone and quartz from dump near 3-ft-thick shear zone in dolostone.
CMM-14-33	027	Grab	NA	Brecciated dolostone with thin stringers of quartz from dump.
CMM-14-34	027	Grab	NA	Silicified, brecciated dolostone from dump.
CMM-14-35	025	Grab	NA	Sheared and brecciated gray dolostone. Intersecting structures strike N60W with 50NE dip and N40E with near vertical dip.
CMM-14-36	025	Grab	NA	Limonitic, sheared dolostone with angular fragments to 0.4ft on dump.
CMM-14-41	030	Grab	NA	Limonitic, sheared, brecciated gray dolostone.
CMM-14-42	030	Grab	NA	Coarsely brecciated dolostone in fine- to medium-grained matrix.
CMM-14-43	030	Grab	NA	8-ft-wide limonitic, sheared, silicified breccia zone at N30W, 65NE.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CMM-14-44	024	Grab	NA	Brecciated dolostone with limonite and hematite.
CMM-15-A	032	Grab	NA	Dolostone float from a shallow pit filled with detritus.
CMM-16-A	007	Grab	NA	Silicified dolostone with quartz veining, copper carbonates, fluorite, and iron oxide.
CMM-16-B	007	Grab	NA	Dolostone and quartz with copper carbonates and limonite from 4-ft-wide zone striking N60E and dipping 60NW.
CMM-16-C	007	Grab	NA	Brecciated, silicified dolostone with quartz veining, copper carbonates and limonite from zone striking N40W and dipping 45NE.
CMM-16-D	017	Grab	NA	Lenticular massive gossan in shattered dolostone with limonite.
CMM-16-E	007	Grab	NA	A 20-ft-thick, silicified shear zone with limonite and copper oxide at N65E, 65NW. in fractured dolostone.
CMM-16-F	009	Grab	NA	Silicified, fractured, limonitic dolostone.
CMM-16-G	009	Grab	NA	Silicified, fractured, limonitic dolostone with copper oxides in a zone trending N10E, 55NW.
CMM-16-H	008	Grab	NA	Brecciated, silicified, limonitic, gray dolostone.
CMM-16-I	008	Grab	NA	Gray drill cuttings from brecciated, silicified dolostone.
CMM-16-J	017	Grab	NA	Quartz vein material with copper carbonates and limonite from fractured zone striking N40W and dipping 70-80NE.
CMM-16-K	028	Grab	NA	Brecciated dolostone with clay, hematite, calcite and copper carbonates from zone striking N55W and dipping 65NE.
CMM-16-L	028	Grab	NA	Quartz with chrysocolla and brecciated dolostone with calcite veinlets from dump.
CMM-16-M	017	Grab	NA	Shear zone with chalcedony, limonite and copper carbonate at N35W, 15NE in gray dolostone.
CMM-16-N	017	Grab	NA	Dolostone breccia, tan, with chalcedony, from stockpile.
CMM-16-O	017	Grab	NA	Gray dolostone drill cuttings with limonite.
CMM-16-P	017	Chip	3.3	A 4-ft-wide, sericitic shear zone with fluorite, copper oxide, limonite and chalcedony at N65W, 35NE in dolostone.
CMM-16-Q	020	Grab	NA	A 4-ft-wide shear zone with limonite and copper carbonates at N30W, 80SW in sandy dolostone.
CMM-16-R	011	Grab	NA	Sericitic dolostone and clay gouge with fluorite from structure trending N40W and dipping 80NE with transverse slickensides dipping at 35.
CMM-16-S	012	Grab	NA	Sheared dolostone zone 2 ft wide striking N25W and dipping 80NE with quartz, malachite, and chrysocolla.
CMM-16-T	012	Grab	NA	Fractured, iron stained, sheared dolostone with copper carbonate from zone about 1.5 ft wide striking north and dipping 75E



Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CMM-16-U	012	Grab	NA	Sheared, silicified dolostone with adularia, fluorite, copper carbonate, and calcite from 0.5-ft-wide zone striking N15W and dipping vertically.
CMM-16-V	012	Grab	NA	Sheared, gray dolostone with limonite and copper carbonate stain.
CMM-16-W	015	Grab	NA	Sheared dolostone with limonite and copper oxide stain from 0.5- to 1-ft wide zone striking N25W and dipping 40NE.
CMM-16-X	015	Grab	NA	Silicified shear zone with calcite, limonite, and copper oxide striking N40W and dipping 60NE in gray dolostone.
CMM-16-Y	015	Grab	NA	Breccia zone with limonite and copper oxide in dolostone.
CMM-16-Z	016	Grab	NA	Shear zone 2 to 3 ft wide striking N50W and dipping 70NE, with limonite and copper oxides, in dolostone.
CMM-16-27	013	Grab	NA	Breccia zone about 5 ft wide and striking N25W nearly vertically with copper carbonates and silicates and drusy quartz in open spaces in dolostone.
CMM-16-28	013	Grab	NA	A 0.8-ft-wide shear zone, with clay gouge and fluorite, striking N20W and dipping 65NE in gray dolostone.
CMM-16-29	020	Grab	NA	Iron and copper stained dolostone from dump.
CMM-16-30	021	Grab	NA	Sheared dolostone with iron and copper carbonate stain from dump.
CMM-16-31	021	Grab	NA	Silicified dolostone breccia trending north and dipping vertically.
CMM-16-32	014	Grab	NA	Brecciated dolostone with copper oxide stain and calcite veinlets from zone about 4 ft thick. Shaft on structure inclined at 40 and strikes N78E
CMM-16-35	016	Grab	NA	Sheared dolostone striking N10W and dipping 65NE. with limonite, copper carbonate stain and calcite.
CMM-16-39	020	Chip	1.0	Silicified shear zone with limonite and copper carbonate in dolostone.
CMM-16-40	015	Grab	NA	Silicified shear zone with limonite and copper carbonate striking N25W and dipping 60NE in dolostone.
CMM-16-41	018	Grab	NA	Shear zone about 4 ft wide striking N20E and dipping vertically in dolostone. The zone contains quartz veins, fluorite, copper carbonates, and limonite.
CMM-16-42	018	Grab	NA	Quartz vein material, fluorite, copper oxide, and limonite in sheared dolostone striking N70W and dipping 40SW.
CMM-16-44	023	Grab	NA	Dolostone with limonite from dump with fragments mostly as large as 0.25 ft.
CMM-16-45	019	Grab	NA	Banded quartz and dolostone with calcite and copper carbonate in a vertical zone striking N70W
CMM-16-49	023	Grab	NA	Limonitic, sheared, brecciated gray and yellow dolostone with minor copper carbonate stains and silicification. The mineralized zone, 5-10 ft thick, trends N60W and is contorted but nearly vertical.
CMM-16-50	023	Grab	NA	Gray dolostone cuttings from drill hole near sample

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
				CMM-16-49.
CMM-16-51	023	Grab	NA	Limonitic, vuggy, gossany rock, probably dolostone.
CMM-16-52	020	Grab	NA	Quartz-veined, sheared, limonitic gray dolostone breccia with copper carbonate staining at mouth of adit. Veining, about 0.5 ft thick, strikes N25W and dips 68oNE. Dolostone is fractured around vein.
CMM-17-A	006	Grab	NA	Fluorite along low-angle fault striking N85E and dippingNW. through black and tan dolostone. Sheared, crushed dolostone, gouge, sericite, fluorite, limonite (in 1-2 ft pods) and secondary copper minerals are mixed along the fault, which is about five feet thick.
CMM-17-B	006	Grab	NA	Fluorite (50 percent) and quartz with minor limonite along sheared zone obscured by slopewash and caliche cementation.
CMM-17-C	006	Chip	3.0	Sheared zone, three ft thick, striking N50W and dipping 80NE through brecciated dolostone. The sheared zone contains talcose(?) gouge, fine-grained fluorite, and about 5 percent secondary copper minerals.
CMM-17-D	006	Grab	NA	A sheared low-angle vein is 1.5-2.0 ft thick and intersected by a sheared vein striking N15E with dip 75SE. in black dolostone. Veins are mineralized by clay gouge, brecciated fluorite, and secondary copper minerals.
CMM-17-E	005	Chip	NA	Light gray, fine-grained dolostone with vuggy texture.
CMM-17-F	006	Grab	NA	Fluorite (50 percent) and quartz with minor limonite along sheared zone obscured by slopewash and caliche cementation.
CMM-17-G	004	Chip	0.5	Fluorite fracture filling in sheared, jointed gray dolostone. Mineralized zone also contains sericite, quartz, and limonite-stained vugs, possibly after pyrite, strikes N65W, and dips 35NE.
CMM-17-H	006	Grab	NA	Fluorite, sericite, and secondary copper minerals in stockpile mined from the Valley View mine.
CMM-18-A	041	Grab	NA	Weathered granitic rock, schist, gneiss, and pegmatite in area of small dozer trenches.
CMM-18-B	040	Grab	NA	Weathered, limonite-stained granitic rock from small dozer trench.
CMM-18-C	040	Grab	NA	Granitic gneiss, diorite, and weathered granitic rock from shallow dozer cut.
CMM-18-D	040	Grab	NA	Gabbro in layered intrusive, porphyritic, with limonite on fractures.
CMM-18-E	040	Grab	NA	Gabbro in layered intrusive, olive green to black with limonite on fractures.
CMM-19-A	112	Grab	NA	Lake sediments, white-crusts, gray to tan, horizontal.
CMM-19-B	112	Grab	NA	Lake sediments, white to gray, powdery, at 75ft by 15 ft by 2 ft trench.
CMM-19-C	112	Grab	NA	Lake sediments, gray to tan, horizontal, with some fine pebble and sand layers in a zone about 2 ft thick cemented by evaporites.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CMM-20-A	105	Grab	NA	Quartz vein in tan to brown dolostone. Vein strikes N70E, dips 80NW., and is limonite stained and associated with wollastonite(?), garnet, marble, and secondary copper minerals.
CMM-20-B	105	Grab	NA	Altered, stained rhyodacite at contact with dolostone. Rhyodacite contains disseminated pyrite and chalcopryrite(?) and dolostone contains epidote, calcite, diopside, and wollastonite; all rocks are limonitic and stained by manganese oxides and copper carbonates. Contact zone strikes EW. and dips 70S.
CMM-20-D	110	Grab	NA	Silicified dolostone and quartz vein with copper carbonates, limonite, and manganese oxides. Dolostone is gray to black and has wet, organic odor. Mineralized zone strikes N20E and dips 65NW.
CMM-20-E	107	Grab	NA	Mineralized zone 1 ft wide striking N40W and dipping 70SW in gray to black dolostone contains chalcedonic quartz, sphalerite(?), willemite(?), limonite, smithsonite(?), and copper carbonates.
CMM-20-F	107	Grab	NA	Silicified, limonitic, fractured dolostone stained by limonite, copper carbonates, and manganese oxides.
CMM-20-G	107	Grab	NA	Silicified, chalcedonic, brecciated dolostone with copper carbonates, limonite, manganese oxides, and secondary zinc minerals.
CMM-20-H	108	Grab	NA	Brecciated, silicified tan to dark gray dolostone with white quartz veins, chalcedony, limonite, manganese oxides, and secondary copper and zinc minerals.
CMM-20-I	109	Grab	NA	Limonitic, tactitic zones in gray dolostone. Structures strike N10W with vertical dip and N70E with dip 50NW.
CMM-20-J	108	Grab	NA	Limonitic and silicified gossan along sheared zone striking N70 E with dip 55NW in dolostone. Minor secondary copper mineralization.
CMM-20-K	108	Grab	NA	Mafic dike, fine grained, striking N15W with 70NE dip in dolostone. Quartz, limonite, and hematite associated.
CMM-20-L	108	Grab	NA	Limonitic, silicified dolostone from brecciated, low-angle structure. Minor malachite stain.
CMM-20-M	108	Grab	NA	Limonitic boxwork gouge from fault striking N55W and dipping 75NE. Chrysocolla and malachite stain.
CMM-20-N	101	Grab	NA	Magnetite-rich, limonitic tactitic breccia in gray dolostone.
CMM-20-O	106	Grab	NA	Limonitic, vuggy, gossany breccia in gray dolostone. Zone is 4-5 ft wide and trends approximately N30W with dip 70NE.
CMM-20-P	106	Grab	NA	Limonitic, silicified, sericitized granodiorite(?) with minor secondary copper carbonate stains.
CMM-20-Q	106	Grab	NA	Limonitic, gossany tactite in gray dolostone.
CMM-20-R	106	Grab	NA	Limonitic, magnetite-rich, vuggy, gossany contorted skarn in gray dolostone. Strike of skarn is EW and dip nearly vertical. May have NS intersecting structure.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CMM-20-S	106	Grab	NA	Limonitic, sheared, gossany tactite 4-5 ft thick at contact of gray dolostone with granodiorite. Porphyritic gray dike is associated with the contact zone, which trends EW. with dip 65 N The tactite is magnetite rich and contains chalcedonic quartz, and mica, some green.
CMM-20-T	106	Grab	NA	Limonitic, silicified, fractured zone in granodiorite. Zone is three ft wide, strikes N34W, and dips 80SW.
CMM-20-U	106	Grab	NA	Brecciated, vuggy dolostone- with minor limonite and copper carbonate stains. The brecciated zone is at least 10 ft thick, trends EW., and is nearly vertical. Green porphyritic dikes, tactites, and magnetite veins occur nearby.
CMM-20-V	103	Grab	NA	Limonitic, vuggy, silicified, contorted, yellow-green-stained tactite band 0.5-1.0 ft thick striking N40W with 80NE dip in gray dolostone which strikes N70W with 40NE dip.
CMM-20-W	103	Grab	NA	Sheared, fractured, limonitic, altered zone four ft thick with dike filling striking N40 W and dipping 65SW in gray dolostone. Cross-cutting 1-ft-thick tactite strikes N10W with 85SW dip.
CMM-20-X	103	Grab	NA	Limonite-, copper carbonate-, and yellow-green-mineral stained, brecciated, 0.5-ft-thick tactite band striking N25W with 85SW dip in dark and pale gray dolostone.
CMM-20-Z	101	Grab	NA	Limonitic, brown to black, sheared, brecciated tactitic, copper carbonate stained dolostone.
CMM-20-27	101	Random Chip	50	Gray, fractured dolostone with minor limonite staining.
CMM-20-28	101	Grab	NA	Limonitic, copper carbonate and manganese oxide stained, vuggy, gossany, drusy, tactitic sheared breccia associated with intensely altered dike which trends N50W and dips 70SW.
CMM-20-29	101	Random Chip	100	Dolostone, pale gray, fractured, with brown weathering and minor limonite and manganese oxide staining. Numerous minute fractures.
CMM-20-30	102	Grab	NA	Gossany, silicified, chalcedonic structure with limonite, manganese oxides, and secondary zinc minerals striking N50W and dipping 40-50SW. in gray to tan or brown dolostone.
CMM-20-31	102	Grab	NA	Brecciated, limonitic, manganese oxide stained quartz vein cemented by chalcedony with secondary zinc minerals. Zone is as thick as 10 ft with strike N80W and dip 70SW. in gra to tan dolostone.
CMM-20-32	102	Grab	NA	Brecciated, limonitic quartz vein with chalcedony cement in gray to tan dolostone. Quartz vein zone is 4 to 6 ft wide and strikes N35E with dip 35NW.
CMM-20-33	102	Grab	NA	Skarn in gray to tan dolostone. Skarn is 6 ft thick and contains magnetite, diopside (idocrase(?)), wollastonite, mica, garnet, and secondary iron, copper, lead, and manganese minerals.
CMM-20-34A	097	Grab	NA	Chalcedony-cemented, brecciated quartz vein as thick as 20 ft striking N10-20E with 25-90NW dip in gray dolostone and limy shale.



Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CMM-20-34B	097	Grab	NA	Chalcedony-cemented, brecciated quartz vein as thick as 20 ft striking N10-20E with 25-90NW dip in gray dolostone and limy shale. Contains galena(?) and secondary antimony(?), copper, iron, and manganese minerals.
CMM-20-35	095	Grab	NA	Shaly marblized dolostone with chert stringers and nodules.
CMM-20-36	099	Grab	NA	Porphyritic, fractured, gray to tan, fine-to medium-grained quartz monzonite with limonite on fractures.
CMM-20-37	096	Grab	NA	Quartz vein with limonite on fractures and disseminated.
CMM-20-38	096	Grab	NA	Gray dolostone, quartz monzonite, slightly porphyritic, and quartz vein, fractured and brecciated; all have limonite on fractures. Structure strikes N40W and dips 80SW.
CMM-20-40	104	Grab	NA	Silicified limonitic gouge in 7-ft-wide zone striking N15W with 75NE dip in tan, bleached, caliche-coated dolostone. Minor malachite staining.
CMM-20-41	104	Grab	NA	Silicified limonitic gouge in 2-ft-wide zone striking N30W with 15SW dip in tan, bleached, caliche-coated dolostone. Minor malachite staining.
CMM-20-42	104	Grab	NA	Lenses of fractured quartz as long as 2 ft along dark-green, fine-grained mafic dike in dolostone; malachite.
CMM-20-43	095	Grab	NA	Silicified limonite gouge with pyrite from stockpile of two contorted zones of brecciated dolostone trending EW.
CMM-20-44	095	Grab	NA	Gray dolostone, not apparently mineralized.
CMM-20-45	094	Grab	NA	Silicified limonite gouge in gray dolostone.
CMM-20-46	094	Grab	NA	Gray dolostone, not apparently mineralized.
CMM-20-47	095	Grab	NA	Silicified limonite gouge along zone trending N10E. Four-ft-thick bed of altered, bleached dolostone strikes N10W and dips 35SW above portal of short adit.
CMM-20-48	095	Grab	NA	Silicified limonite gouge from altered patch in gray dolostone. Bedding strikes N30E and dips 35NW.
CMM-20-49	095	Grab	NA	Silicified limonite gouge in zone trending W and dipping 80 S. in gray dolostone.
CMM-20-50	095	Grab	NA	Silicified limonite gouge from nearly vertical zone in gray dolostone.
CMM-20-51	101	Random Chip	25	Limonitic, fractured, lightly sheared quartz monzonite; shearing strikes N15W and dips 80NE.
CMM-20-52	099	Grab	NA	Limonitic, manganese-oxide-stained, sheared, brecciated, gossany tactite with minor copper carbonate stains.
CMM-20-53	098	Grab	NA	Limonitic, gossany, silicified, vuggy, tactitic quartz monzonite and gray dolostone with copper carbonate stains.
CMM-20-54	098	Random Chip	10	Limonitic, fractured, gray quartz monzonite.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CMM-20-55	098	Grab	NA	Limonitic, vuggy, partly brecciated quartz vein cemented by quartz. Vein is 4-5 ft thick, similar to several others nearby.
CMM-20-56	098	Grab	NA	Sheared, brecciated, altered contact zone of brown to gray dolostone and quartz monzonite. Contact zone is 4-5 ft thick and strikes N30E and dips 80SE.
CMM-20-57	098	Grab	NA	Sheared, brecciated, gossany contact zone about 10 ft thick between pale gray dolostone and quartz monzonite. Zone strikes N40E and dips 45NW. Shaft may be at intersection with cross-cutting structure from site of sample CMM-20-56.
CMM-20-58	098	Random Chip	50	Lightly fractured massive pale gray dolostone above thrust fault(?) of CMM-20-57.
CMM-20-60	104	Grab	NA	Quartz, limonite, and mafic dike from nearly vertical structure striking N10W in gray dolostone. Galena(?) and malachite occur in the quartz vein.
CMM-21-B	041	Grab	NA	Pegmatite float from pit in schist and granitic rock. Chlorite and garnet(?) around pegmatite.
CMM-21-C	041	Grab	NA	Limonite stained, liesegang-banded quartz monzonite; dikes of basalt, gabbro, and simple granite pegmatite occur nearby.
CMM-21-D	041	Grab	NA	Sheared, brecciated zone striking EW with 10 contorted dip in schist and gneiss. Zone is limonitic, liesegang-banded, and silicified. Garnet-bearing granitic float occurs nearby.
CMM-22-A	001	Grab	NA	Gray to tan alluvial fan accumulations in dry wash.
CMM-23-A	068	Grab	NA	Contact of brown amphibolite gneiss with garnet-bearing, pegmatitic granitic gneiss; contact strikes N25W and dips 80SW. Sample of amphibolite.
CMM-23-B	068	Grab	NA	Contact of brown amphibolite gneiss with garnet-bearing, pegmatitic granitic gneiss; contact strikes N25W and dips 80SW. Sample of gneiss.
CMM-23-C	066	Grab	NA	Limonite stained quartz vein with small 1/4 inch blebs of black sulfides. Quartz vein is between shears about 3 ft apart and strikes N55W with dip 65NE.
CMM-23-D	066	Grab	NA	Quartz vein from small trench in weathered, bleached granitics with small garnets, limonitic schist, and contorted shear zones.
CMM-23-E	066	Grab	NA	Quartz vein, brecciated, limonitic, with black massive sulfide masses. Quartz probably from zone between two shears about four ft apart striking N55W and dipping 75-80NE. in sheared, limonitic granitic rock.
CMM-23-F	064	Grab	NA	Pegmatite dike from small trench; muscovite throughout pegmatite.
CMM-23-I	066	Chip	13.0	Sheared, limonitic, sericitic, silicified schist and gneiss.
CMM-23-J	066	Grab	NA	Sheared, brecciated, limonitic, sericitic, feldspar-enriched, barite-bearing zone with about 5 percent galena and minor azurite and malachite. Zone is about 0.5 ft thick, strikes N60W, and dips 70NE.
CMM-23-K	066	Grab	NA	Limonitic schist and gneiss with minor limonite staining.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CMM-23-L	066	Grab	NA	Sheared, brecciated, silicified, limonitic, sericitic, vuggy, five-ft-wide zone striking N50-75W and dipping 50 NE. in schist and gneiss. Zone contains galena (estimated 10 percent), chalcopyrite (estimated 1 percent), azurite, and malachite. Slickensides in zone in trench dip 75NE.
CMM-23-M	066	Grab	NA	Sheared, bleached, limonitic, silicified, brecciated zone striking Nand dipping 85E in schist and gneiss.
CMM-23-N	064	Grab	NA	Sheared, limonitic, cataclastic contacts of green, fine-grained dike, pegmatite, and schist and gneiss. Contacts strike N25W and dip nearly vertical.
CMM-23-O	064	Grab	NA	Limonitic, black-stained, vuggy, sheared, brecciated zone 2-3 ft wide striking N70E and dipping 75SE. in schist.
CRM-01	269	Grab	NA	Iron- and copper-oxide stained quartz pieces bearing sparse hematite cubes altered from pyrite from shaft dump.
CRM-02	269	Grab	NA	Iron- and copper-oxide stained quartz pieces up to 12 in. thick from about 2 tons of material on loading dock at adit.
CRM-03	412	Grab	NA	Pieces of quartz chosen at random from various locations on the pegmatite (for whole-rock analysis).
CRM-04	412	Grab	NA	Pieces from a 10 ft x 5 ft exposure of grey feldspar from the west end of the pegmatite (for whole-rock analysis).
CRM-05	412	Grab	NA	Pieces of quartz containing sparse molybdenite from various locations on and below the pegmatite.
CRM-06	404	Chip	.8	Grey-green gouge from shear zone.
CRM-07	406	Grab	NA	Brecciated fragments of vein quartz with voids filled by iron oxides from 1-ton stockpile on dump of shaft.
CRM-08	405	Chip	2.0	Across iron- manganese- copper- oxide stained quartz veins in prospect pit.
CRM-09	266	Grab	NA	Pieces of white limestone from near portal of lower adit (for whole-rock analysis)
CRM-10	265	Chip	5.0	Across contact between limestone and granite consisting of quartz blebs and iron-oxide-stained, epidote-rich granite.
CRM-11	265	Grab	NA	White limestone from southernmost cut (for whole-rock analysis).
CRM-12	255	Chip	1.5	Across fault zone containing several parallel quartz stringers, a fraction to 1.5 in thick. 1.5 in thick.
CRM-13	273	Chip	4.0	Across silicified shear zone containing chlorite, iron oxides, and a number of quartz veins, veinlets, and blebs up to 1.0 ft thick.
CRM-14	409	Select	NA	Silicified granite with quartz veinlets containing sparse fine-grained, black unidentified minerals from the shaft dump.
CRM-15	411	Chip	4.5	Across silicified granite consisting of about 70% quartz adjacent to contact with granite at west end of 4.5-ft-long trench. Much bright red and yellow iron-oxide staining. Sparse pyrite and vugs with quartz crystals.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CRM-16	411	Select	NA	Bright red and yellow iron-oxide-stained quartz pieces from dump of 45-ft-long trench. Sparse pyrite and cubic voids where pyrite has dissolved.
CRM-17	411	Grab	NA	Bright red iron-oxide-stained silicified granite from a cross-shear from the SW slope of the lower part of the ridge.
CRM-18	410	Select	NA	Iron- and manganese-oxide-stained quartz pieces containing sparse black unidentified minerals (?) from dump.
CRM-19	412	Grab	NA	Brecciated white quartz fragments healed by orange-tan chalcedonic quartz. The brecciated quartz occurs in a small area about 8 ft in radius.
CRM-20	407	Select	NA	Highly iron-stained quartz pieces from various localities in the altered area. A few rare pieces appear opalized (?).
CRM-21	273	Select	NA	Copper-oxide-stained quartz pieces from the two dozer cuts.
CRM-22	274	Select	NA	Pieces of iron-stained quartz from the shaft dump.
CRM-24	284	Chip	6.0	Iron-stained material from both shear zones.
CRM-25	285	Select	NA	Pieces of iron-oxide-stained quartz- bearing pyrite and possible arsenopyrite from the dump of the main shaft.
CRM-26	281	Select	NA	Slightly iron-oxide-stained and silicified rhyolite from near portal of adit.
CRM-27	272	Select	NA	Pieces of iron- and manganese-oxide-stained vein quartz from dump.
CRM-28	281	Chip	NA	Random chip of grey and pink clayey rhyolite from right rib of portal.
CRM-29	282	Chip	5	Across northern vein consisting of iron-oxide-stained brecciated quartz containing hematite cubes after pyrite and rare small crystals of vanadinite. Several brecciated quartz pieces cemented by orange chalcedonic (?) quartz.
CRM-30	282	Chip	1.5	Across brecciated quartz vein. Moderately abundant iron- and manganese-oxide staining
CRM-31	303	Chip	.4	Across gouge-filled fracture.
CRM-32	286	Grab	NA	Iron-stained muscovite-rich pieces from stockpile.
CRM-33	306	Grab	NA	Gray-white clay from north end of exposure.
CRM-35	270	Select	NA	Pieces of heavily iron-oxide-stained vein quartz pieces from dump of pit.
CRM-36	268	Select	NA	Iron- and copper-oxide-stained pieces of vein quartz from dump of shaft.
CRM-38	417	Select	NA	Iron-oxide-stained pieces of vein quartz bearing very sparse pyrite, galena, and a few specks of chalcopyrite.
CRM-39	297	Select	NA	Iron-oxide-stained, pyrite-bearing, siliceous rock from a two-ton stockpile. Sparse, black, very small, unidentified minerals in thin streaks.
CRM-40	267	Chip	1.25	Across the gray opaline layer and a few inches of the underlying, bright red, iron-stained rock.



Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CRM-41	302	Chip	4.0	Across heavily iron-oxide-stained, pyrite-bearing vein and highly silicified rock along hanging wall.
CRM-42	292	Select	NA	Pieces of copper-oxide-stained vein quartz and altered granite bearing fluorite and possible huebnerite from dump of lower adit.
CRM-43	294	Select	NA	Pieces of copper-oxide-stained vein quartz and silicified granite bearing pyrite, chalcopryite, and a few rare cubes of fluorite.
CRM-44	293	Select	NA	Iron- and copper-oxide stained, pyrite-bearing vein quartz pieces from dump. Also sparse, very small, dark-black unidentified minerals (huebnerite?)
CRM-45	305	Grab	NA	Pieces of white limestone from dozer pit.
CRM-50	298	Grab	NA	Bright white limestone from dozer cut (for whole-rock analysis).
CRM-51	291	Select	NA	Pieces of quartz and altered granite cut by quartz stringers and bearing sparse pyrite, very small unidentified black minerals, and stained by iron and copper oxides.
CRM-52	290	Select	NA	Iron- and copper-oxide-stained pieces of white and pink quartz and altered granite. Some rare molybdenite and possible smithsonite.
CRM-53	290	Chip	.6	Across an iron-oxide-stained quartz vein striking N11E and dipping 50W in a small shear zone cutting fractured granite. The vein contains about 5% pyrite.
CRM-54	416	Select	NA	Pieces of iron-oxide-stained, pyrite-bearing vein quartz from a 5-ton stockpile on dump of adit.
CRM-55	290	Select	NA	Pieces of vein quartz carrying sparse molybdenite and stained by copper oxides, from dump of 25-ft cut.
CRM-56	415	Select	NA	Pieces of iron- and copper-oxide-stained quartz and skarn material from dump of shaft.
CRM-57	304	Select	NA	Quartz pieces bearing sparse pyrite, chalcopryite, and stained by iron and copper oxides from dump of 30-ft shaft.
CRM-58	296	Select	NA	Pieces of iron- and copper-oxide-stained skarn material from main dump at Hard Cash workings. Some fluorite and possible chalcopryite.
CRM-59	295	Select	NA	Pieces of vein quartz bearing minor pyrite.
CRM-60	296	Select	NA	Pieces of vein quartz carrying minor pyrite from dump of main adit.
CRM-61	304	Select	NA	Pieces of iron- and copper-oxide-stained skarn material from dump of 15-ft adit. Mineralized rock on dump is very sparse.
CRM-62	304	Select	NA	Sparse pieces of iron- and copper-oxide-stained skarn material from dump of 20-ft shaft.
CRM-63	271	Select	NA	Pieces of iron- and copper-oxide-stained skarn material bearing sparse fluorite, pyrite, chalcopryite. Some crusts of possible smithsonite.
CRM-64	413	Select	NA	Pieces of vein quartz bearing sparse pyrite and hematite cubes after pyrite and one small speck of bornite.



Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CRM-65	414	Select	NA	Pieces of iron- and copper-oxide-stained skarn material bearing pyrite and chalcopyrite from dump of flooded shaft.
CRM-66	289	Select	NA	Pieces of copper-oxide-stained skarn material from dump of 100-ft shaft.
CRM-67	287	Chip	2.5	Across heavily iron-oxide-stained, silicified, and argillized shear zone from back of portal of lower adit.
CRM-68	287	Select	NA	Yellow-green, hydrothermally altered rock from dump of lower adit.
CRM-69	287	Select	NA	Pieces of heavily iron- and copper-oxide-stained vein quartz bearing chalcopyrite and galena (2-5%) and heavily stained from dump of upper adit.
CRM-70	275	Select	NA	Pieces of vein quartz from dump of cut. Iron- and copper-oxide staining is moderate to light. No sulfides.
CRM-71	276	Select	NA	Pieces of iron- and copper-oxide-stained vein quartz from dump of combination cut-shaft-adit.
CRM-72	277	Select	NA	Pieces of iron-oxide-stained vein quartz bearing minor pyrite and rare very small unidentified black minerals from 8-ton stockpile on dump of main shaft.
CRM-73	277	Select	NA	Pieces of slightly iron-oxide-stained vein quartz from dump. Rare hematite cubes altered from pyrite.
CRM-74	278	Chip	.25	Across iron-oxide-stained gouge in fracture.
CRM-75	408	Select	NA	Pieces of iron-oxide-stained vein quartz carrying pyrite, galena, and chloro-bromides (?) from small stockpile at mill.
CRR-1	359	Select	NA	Galena in iron stained quartz with minor copper staining
CRR-2	336	Select	NA	Altered monzonite from alluvium with minor iron oxide staining
CRR-3	337	Chip	2.0	Granitic fragments from bulldozer cut in alluvium
CRR-4	338	Select	NA	Chalcopyrite along with secondary blue and green copper minerals from a sheared contact of granite and limestone
CRR-5	338	Select	NA	Copper stained shear zone with a small veinlet of chalcopyrite
CRR-6	338	Chip	1.6	Copper stained shear zone in skarn
CRR-8	339	Select	NA	Copper stained skarn material containing epidote, calcite, specular hematite, chalcopyrite, malachite, azurite, and chrysocolla
CRR-9	339	Select	NA	Calc-silicate consisting mostly of epidote with some minor copper staining
CRR-10	339	Grab	NA	Grey and brown sheared fractured limestone
CRR-11	342	Chip	2.3	Across shattered quartz vein along sheared fine-grained light green altered mafic dike in granite
CRR-12	342	Chip	3.0	Across shattered quartz vein which has chlorotic and limonitic zones in bands subparallel to the vein margin

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CRR-13	342	Chip	5.3	Fractured quartz vein that is iron-oxide stained along fractures in an altered granite
CRR-14	342	Chip	4.8	Fractured iron-oxide stained quartz vein with specular hematite. Vein is parallel to a shear zone and cuts across a diabase dike
CRR-15	343	Random	NA	Solid massive magnetite with some hematite
CRR-16	343	Chip	3.0	Across shear zone in limestone parallel to andesite dike
CRR-17	343	Select	NA	Fine grained massive magnetite from an iron skarn zone which has minor amounts of copper staining
CRR-18	343	Select	NA	Fine grained massive magnetite which is heavily copper stained
CRR-19	344	Grab	NA	Hematite-limonite stained vuggy quartz breccia
CRR-20	344	Random	NA	Light pink bleached altered andesite dike
CRR-21	344	Random	NA	Yellow-green fine grain massive garnet with euhedral crystals lining vugs
CRR-22	344	Chip	4.5	Across iron-oxide shear zone contact of a diabase dike in dolomite
CRR-23	344	Select	NA	Iron-oxide and copper stained vuggy quartz with specular hematite and minor amounts of galena
CRR-24	345	Random	NA	Medium purple aphanitic porphyritic quartz latite
CRR-25	334	Random	NA	Medium grey limestone with minor secondary copper staining
CRR-26	334	Chip	6.5	Across iron oxide-stained shear zone in limestone
CRR-27	368	Chip	4.5	Iron oxide-stained shear zone
CRR-28	368	Select	NA	Soft and friable reddish-brown iron oxides
CRR-29	368	Grab	NA	Soft and friable reddish-brown iron oxides with fragments of quartzite
CRR-30	368	Grab	NA	Quartzose gneiss with secondary copper stains along fractures
CRR-31	368	Grab	NA	Altered gneiss which is iron oxide stained
CRR-32	370	Select	NA	Iron oxide-stained sheared limestone and quartzite which has been silicified, and contains blebs of copper stained galena
CRR-33	370	Chip	NA	Shear zone in silicified, altered brown limestone with blebs and stringers of galena
CRR-34	369	Chip	15.0	Across shear zone containing magnetite, hematite, and limonite
CRR-35	369	Select	NA	Massive magnetite which is copper oxide stained
CRR-36	369	Select	NA	Black to grey fine grain massive magnetite with blebs and stringers of pyrite and chalcopyrite
CRR-37	366	Chip	4.0	Lightly iron stained shear zone is brown to grey limestone
CRR-38	367	Grab	NA	Altered medium grain porphyritic granite

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CRR-39	367	Chip	20.0	A large shear zone in which the center part of the zone has been intensely iron oxide stained
CRR-40	366	Grab	NA	Brecciated and sheared siltstone and dolomite stained red to purple from iron oxides
CRR-41	364	Select	NA	Brecciated quartzite which has been cemented with iron oxides
CRR-42	362	Chip	1.5	Across iron oxide-stained milky white quartz vein with minor copper staining
CRR-43	362	Select	NA	Iron oxide-stained vuggy milky white quartz vein material with minor secondary copper staining
CRR-44	362	Chip	4.0	Across contact zone of brown thinly bedded dolomite and overlying quartzite
CRR-45	362	Grab	NA	Quartzose band along bedding plane shear in dolomite and quartzite
CRR-46	362	Random	NA	Yellow to brown baked silicified iron oxides with some minor copper oxides
CRR-47	362	Grab	NA	Iron oxide-stained reddish purple sheared quartzite
CRR-48	362	Grab	NA	Iron oxide-stained breccia zone in limestone
CRR-49	363	Chip	3.8	Across contact of quartz latite sill and a shaly limestone
CRR-50	363	Chip	4.0	Across contact of quartzite and overlying limestone. The gouge in the quartzite is iron oxide-stained, but the limestone is not stained.
CRR-51	358	Chip	5.0	Fractured recrystallized quartzite
CRR-52	358	Select	NA	Lightly iron oxide-stained milky white quartz with trace amounts of pyrite
CRR-53	358	Chip	2.5	Across milky white quartz vein in recrystallized quartzite
CRR-54	358	Grab	NA	Quartzite breccia cemented with limonite stained silica
CRR-55	352	Grab	NA	Iron stained milky white quartz with trace amounts of pyrite and limonite after pyrite pseudomorphs
CRR-56	346	Grab	NA	Coarse grain pegmatite in a banded recrystallized quartzite
CRR-57	350	Chip	4.0	Fine grain iron stained gouge zone in brecciated limestone
CRR-58	350	Chip	4.0	do
CRR-59	350	Select	NA	Soft and friable iron oxides
CRR-60	349	Chip	3.4	Across sheared limonitic zone in granite
CRR-61	349	Grab	NA	Lightly iron stained milky white quartz
CRR-62	349	Chip	11.0	Across iron stained shear zone with clasts of quartz and quartzite
CRR-63	349	Grab	NA	Iron stained milky white quartz with hematite fill vugs. One small bleb of pyrite observed
CRR-64	349	Grab	NA	Iron stained milky white quartz with minor stringers of pyrite

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CRR-65	350	Chip	4.0	Yellow to red iron stained shear zone in quartzite
CRR-66	353	Chip	2.0	Across lightly iron stained shear zone in quartzite
CRR-67	353	Grab	NA	Iron stained milky white quartz with minor amounts of pyrite
CRR-68	353	Grab	NA	Brecciated quartz fragments that have been cemented with iron oxides
CRR-69	353	Grab	NA	Iron oxide-stained vuggy milky white quartz with blebs and stringers of pyrite
CRR-70	353	Grab	NA	do
CRR-71	358	Chip	1.5	Biotite schist interlayered with quartzite. Scintillometer reading is 2600 counts per second (34 times background)
CRR-72	351	Chip	2.0	Across iron oxide-stained shear zone in quartzite
CRR-73	351	Grab	NA	Equal granular chloritic altered diorite
CRR-74	351	Grab	NA	Lightly iron stained milky white quartz from quartz lens in gneiss containing blebs of pyrite
CRR-75	348	Chip	2.5	Iron stained shear zone in gneiss containing fragments of gneiss and quartz
CRR-76	353	Grab	NA	Iron stained vuggy quartz. Some of the iron oxides have been silicified and look like jasper
CRR-77	353	Grab	NA	Iron oxide-stained quartzite
CRR-78	353	Chip	1.3	Iron oxide-stained quartzite which has about 25% open cubic casts
CRR-79	348	Chip	2.4	Shear zone in quartzite containing a shattered quartz vein that is iron oxide-stained along fractures
CRR-80	348	Chip	1.8	Quartz vein in gneiss iron oxide stained along fractures and containing hematite cubic pseudomorphs
CRR-81	348	Chip	2.0	Across shear zone in quartzite containing an iron oxide-stained quartz vein
CRR-82	353	Grab	NA	Pink to purple iron oxide-stained shear zone in quartzite
CRR-83	357	Chip	2.0	Iron oxide-stained shear zone contact between quartzite and pyroxenite
CRR-84	356	Chip	2.0	Across iron oxide-stained quartz vein in brecciated limestone
CRR-85	356	Chip	3.2	Vuggy, fractured, milky white quartz vein in quartzite; limonite stained gouge zone parallel to the quartz vein
CRR-86	356	Grab	NA	Fractured milky white quartz vein that is cemented with silicious iron oxides; quartz contains pyrite and hematite pseudomorphs
CRR-87	356	Grab	NA	Vuggy iron oxide-stained quartz vein containing pyrite in vugs
CRR-88	347	Grab	NA	Iron oxide-stained micaceous quartzite from contact of quartzite and quartz monzonite



Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CRR-89	347	Chip	4.0	Skarn zone at the contact of limestone and diorite consisting of marble, epidote, diopside, garnet and idocrase(?)
CRR-90	347	Grab	NA	Quartz fragments from shear zone in limestone and quartzite
CRR-91	354	Grab	NA	Iron oxide-stained quartz that has been fractured and cemented but still has open voids
CRR-92	354	Chip	8.0	Iron stained shear zone contact of limestone and quartzite which ranges in color from white to yellow to reddish purple
CRR-93	354	Chip	1.5	Fractured iron oxide-stained quartz vein in quartzite containing pyrite
CRR-94	354	Grab	NA	Iron oxide-stained quartz vein with pyrite and hematite and limonite boxwork
CRR-95	360	Grab	NA	Skarn zone in banded quartzite containing garnet, magnetite, idocrase, chrysocolla, chalcopyrite, and sparse pyrite
CRR-96	360	Grab	NA	do
CRR-97	333	Chip	0.8	Quartz pods along shear zone in chloritic and phyllitic metasediments
CRR-98	353	Grab	NA	Fractured iron oxide-stained quartz vein that is cemented with siliceous iron oxides
CRR-99	365	Chip	3.0	Iron oxide-stained shear zone in brecciated quartzite
CRR-100	365	Grab	NA	Iron oxide-stained vuggy quartz with small blebs of pyrite
CRR-101	355	Grab	NA	Shear zone in quartzite with clasts of quartzite containing up to about 25% magnetite
CRR-102	365	Grab	NA	Iron oxide-stained vuggy quartz with blebs of pyrite and minor copper staining
CRR-103	365	Chip	1.2	Across iron oxide zone that follows a bedding plane in quartzite which contains a 2 in. quartz vein
CRR-104	365	Grab	NA	Iron oxide-stained vuggy quartz vein in quartzite with minor copper staining; some of the vugs are lined with euhedral quartz crystals
CRR-105	365	Grab	NA	Siliceous iron oxides cementing quartz fragments
CRR-106	365	Chip	2.3	Fine grain dark grey dike rock that is probably andesite
CRR-107	365	Chip	2.5	Across shear zone in quartzite, mostly fragments of quartzite
CRR-108	365	Grab	NA	Iron oxide-stained quartz vein that has cubic casts up to 1/4 in.
CRR-109	365	Select	NA	Heavily iron oxide-stained milky white quartz with vugs containing euhedral quartz crystals
CRR-110	365	Chip	3.2	Across iron oxide-stained shear zone contact between a dark grey quartzite and a reddish brown quartzite
CRR-111	364	Grab	NA	Iron oxide-stained milky white quartz vein material with pods of limonite boxwork



Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CRR-112	364	Chip	2.0	Across zone of fine grain iron oxides in poorly banded quartzite
CRR-113	364	Grab	NA	Iron oxide-stained quartz fragments that are cemented with a dark brown siliceous iron oxides
CRR-114	364	Grab	NA	Iron oxide-stained vuggy quartz vein material that is brecciated and cemented with silica
CRR-115	364	Grab	NA	Milky white quartz that is iron oxide-stained along fractures and has minor pyrite
CRR-116	361	Select	NA	Iron oxide stained milky white quartz that has minor pyrite.
CTN-1	584	Grab	NA	Brecciated, argillically altered rhyolite tuff with veinlets of quartz/chalcedony.
CTN-2	585	Grab	NA	Lacustrine limestone with white opalite.
CTN-3	583	Grab	NA	Silicified rhyolite with veinlets, concretions, and vugs filled with quartz/chalcedony.
CTN-4	582	Chip	4.0	Brecciated and silicified rhyolite tuff with minor chalcopyrite and copper carbonates in quartz veinlets.
CTN-5	581	Select	NA	Sheared, silicified, and iron-oxide stained rhyolite with narrow quartz veinlets, drusy quartz, and minor chalcopyrite.
CTN-6	581	Select	NA	Silicified, iron-oxide stained rhyolite with minor chalcopyrite.
CTN-7	580	Grab	NA	Brecciated rhyolite with minor chalcopyrite in quartz/chalcedony veinlets.
CTN-8	580	Chip	1.5	Across shear zone; lightly iron-oxide stained rhyolite gouge with veinlets of quartz/chalcedony.
CTN-9	580	Random	NA	Medium gray, densely welded rhyodacite.
CTN-10	580	Select	NA	Silicified, iron-oxide stained brecciated rhyolite.
CTN-11	577	Random	NA	Fractured rhyodacite with weak argillic alteration and minor iron-oxide staining.
CTN-12	578	Chip	1.9	Across shear zone; silicified and brecciated rhyolite and gouge.
CTN-13	578	Chip	3.0	Across shear zone; brecciated rhyolite with quartz veinlets, gouge, and light iron-oxide staining.
CTN-14	578	Chip	4.5	Brecciated rhyolite with narrow (<1in.) quartz veinlets and chalcedonic cementing.
CTN-15	578	Grab	NA	Light green water-lain ash bed with zeolites.
CTN-16	578	Select	NA	Brecciated rhyolite with narrow (<1in.) quartz veinlets and minor chalcopyrite.
CTN-17	579	Grab	NA	Light green bentonitic and zeolitic clay displaying popcorn texture on weathered outcrops.
CTN-18	579	Grab	NA	Brecciated and iron-oxide stained rhyolite tuff.
CTN-19	701	Chip	2.0	Across sheared zone of crushed and slightly silicified and iron-oxide stained granitic gneiss.
CTN-20	701	Grab	NA	Lightly iron-oxide stained augen gneiss.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CTN-21	701	Grab	NA	Iron-oxide and copper carbonate stained vein quartz with boxwork after pyrite.
CTN-22	701	Chip	6.0	Across iron-oxide and copper carbonate stained vein quartz with boxwork after pyrite.
CTN-23	576	Chip	6.0	Across shear zone; rhyolite gouge with quartz veinlets containing minor pyrite.
CTN-24	586	Grab	NA	Lacustrine limestone with white opalite.
CTN-25	587	Grab	NA	Lacustrine limestone with white opalite.
CTN-26	586	Grab	NA	Lacustrine limestone with white opalite.
CTN-27	424	Chip	5.0	Sheared quartz monzonite, vein quartz (0.5 ft), gouge, and minor pyrite, chalcopyrite, and galena.
CTN-28	424	Grab	NA	Brecciated quartz monzonite, vein quartz, and minor pyrite, chalcopyrite, and galena.
CTN-29	424	Grab	NA	Iron-oxide stained vein quartz with minor pyrite, galena, and azurite/malachite.
CTN-30	424	Chip	3.0	Sheared quartz monzonite (2.0 ft), vein quartz (0.5 ft), gouge (0.5 ft), and minor pyrite and galena.
CTN-31	425	Chip	4.2	Across altered and iron-oxide stained zone in quartz monzonite.
CTN-32	425	Chip	4.1	Across shear zone; brecciated quartz monzonite and copper carbonate stained vein quartz.
CTN-33	600	Chip	3.0	Sheared iron- and manganese-oxide stained granitic gneiss.
CTN-34	600	Select	NA	Lacustrine deposited tuff beds with possible zeolites.
CTN-35	600	Select	NA	Silicified and weakly argillically altered granitic gneiss with minor malachite/azurite staining.
CTN-36	601	Grab	NA	Sheared granitic gneiss with vein quartz.
CTN-37	601	Chip	8.2	Across shear zone; brecciated iron- and manganese-oxide stained granitic gneiss with vein quartz.
CTN-38	601	Select	NA	Granitic gneiss with quartz veinlets along foliation planes.
CTN-39	601	Select	NA	White vein quartz with siliceous boxwork.
CTN-40	602	Grab	NA	White stockwork vein quartz along foliation planes in a dark gray quartz-feldspar-biotite gneiss.
CTN-41	602	Chip	1.2	White vein quartz with boxwork and malchite/azurite staining.
CTN-42	702	Chip	2.0	Vein quartz with heavy secondary copper staining (chrysocolla, malachite, azurite).
CTN-43	702	Select	NA	Vein quartz with heavy secondary copper staining (chrysocolla, malchite, azurite).
CTN-44	426	Select	NA	Brecciated and iron-oxide stained vein quartz with siliceous boxwork, pseudomorphs (limonite/hematite after pyrite), and minor chalcopyrite.
CTN-45	426	Select	NA	Across shear zone; iron-oxide stained stockwork quartz with minor chalcopyrite.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CTN-46	426	Chip	3.1	Across iron-oxide stained quartz vein with minor chalcopyrite.
CTN-47	426	Select	NA	White vein quartz with heavy iron-oxide staining and siliceous boxwork.
CTN-48	426	Select	NA	Iron-oxide and copper stained vein quartz with moderate chalcopyrite.
CTN-49	423	Grab	NA	White vein quartz with siliceous boxwork.
CTN-50	423	Chip	1.1	Brecciated and silicified quartz monzonite.
CTN-51	575	Select	NA	Silicified pink rhyolite.
CTN-52	586	Select	NA	Lacustrine and paleostream silt and sand with organic debris.
CTN-53	586	Select	NA	Paleostream sand and silt with organic debris.
CTN-54	700	Chip	15.2	Iron-oxide stained bull quartz.
CTN-55	700	Chip	7.0	Brecciated, iron-oxide and copper stained vein quartz.
CTN-56	701	Select	NA	Silicified augen gneiss with quartz stringers along foliation planes.
CTN-57	701	Select	NA	Silicified quartz monzonite, vein quartz, and iron-oxide stained gouge.
CTN-58	NOM	Select	NA	Glassy, vesicular to granular perlite.
CTN-59	582	Grab	NA	Silicified and brecciated rhyolite with quartz veinlets (<1 in. wide), drusy chalcedony cavity fillings, and Liesegang banding.
CTP-1	149	Select	NA	Tactite, equal proportions of epidote, garnet, quartz and cherty limestone; from shaft 100 ft N40E of cabin.
CTP-2	149	Select	NA	Tactite; epidote, garnet and quartz heavily stained by malachite; from small stockpile at cabin.
CTP-3	149	Chip	3.5	Tactite; malachite-stained epidote and garnet with 0.5-ft iron-stained zone in middle; zone trends N10E, dips 73W; jointing N10W, dip 73W; from north face of 15-ft shaft.
CTP-4	167	Select	NA	Quartz stringers in limonitic boxwork within silicified limestone; from north end of trench at 23-ft shaft.
CTP-5	165	Select	NA	Silicified limestone with quartz stringers in areas of limonite boxwork; from small stockpile at southeast end of headframe on 30-ft shaft.
CTP-6	165	Select	NA	Silicified limestone with quartz stringers and associated limonite boxwork; from 10-ft pit next to road.
CTP-7	147	Random chip	NA	Sandstone; rose- to buff gray-colored, but mainly salmon pink; very fine-grained and well sorted; strike N40E, dip 15NW; from SW1/4, SW1/4, Sec 30, T15 1/2N, R14E.
CTP-8	147	Random chip	NA	Sandstone; salmon pink; metamorphosed, with 1/8-in. quartz stringers; strike N15W, dip 65W; from C, S1/2, S1/2, SE1/4, Sec 25, T16N, R13E.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CTP-9	144	Chip	3.0	Stratabound iron-stained mineralized zone; stratiform malachite-coated lamina commonly interbedded with limonite-coated lamina; strike N55W, dip 45S; 12 ft stratigraphically below subparallel 6- to 8-ft fault zone; mineralized zone (probably a stratigraphic unit) within buff white limestone, 5 to 10 ft above dark blue-gray limestone from stope 40 ft west of main inclined shaft.
CTP-10	144	Chip	1.0	Iron oxide-colored chert within (along the base of) the fault zone; from small stope 20 ft west of main inclined shaft.
CTP-11	144	Chip	5.5	Green mylonite and fault gouge; from small stope 20 ft west of main inclined shaft.
CTP-12	145	Chip	2.0	Stratabound iron oxide zone (bed) probably 6 ft thick (2 ft exposed at portal); strike N67W, dip 67W; minor fault slippage along hanging wall appears to be local strain accommodating volume changes caused by folding; zone overlain by thin bedded to laminated alternate grayish white and greenish white cherty carbonate, underlain by dark blue-gray massive carbonate with 1/2-in. discontinuous chert lenses.
CTP-13	146	Chip	15	Limonitic cherty mineralized zone, local cinnabar stains and commonly vuggy after sulfides; stratabound within a buff white carbonate unit, and 10 to 20 ft above dark blue-gray limestone; from pit 65 ft N15W of main (north) shaft.
CTP-14	146	Random chip	NA	Light buff-white, somewhat silty carbonate rock with local calcite-cemented edgewise conglomerate; from outcrops 5 to 20 ft west of mineralized zone.
CTP-15	146	Random chip	NA	Dark bluish gray carbonate with 1/4 in. lighter discontinuous beds that weather to a ribbed pattern; recrystallized 1/4 in. white calcite stringers; local solution collapse breccia with siliceous and commonly hematitic matrix; from 20 to 30 ft east (horizontally) of mineral zone.
CTP-16	150	Random chip	NA	Teutonia porphyritic quartz monzonite; potassium feldspar phenocrysts; secondary light green epidote and iron-stains along fracture and grain surfaces; sample from 10-ft square pit in center of bulldozed area; a right-lateral fault in pit strikes N57oW, dips 61W; many fracture orientations which are discontinuous, terminating against other joints; a more prominent joint set strikes N50E and dips 53N.
CTP-17	166	Grab	NA	Massive white (bleached) Goodsprings Dolomite with local (<5%) greenish gray stripes of calc-silicate minerals and a lesser pink mineral; from large stockpile between south pit and north stripped area.
CTP-18	166	Grab	NA	Medium to dark gray, lesser (<15%) bluish facies (unbleached), Goodsprings Dolomite; local 1/4- 1/2-in. local limonite patches (<3%); from south pit on southeast ridge extending from Striped Mountain.
CTP-19	160	Select chip	NA	Coarse-grained porphyritic Teutonia quartz monzonite, heavily cinnabar-stained along joints and slips and between crystal grains; from pit south-southeast of Lipscomb's camp.
CTP-20	159	Chip	3.5	Epidote-rich endoskarn; 10% 1/4-in.-wide quartz stringers; from face of 3-ft adit start.



Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CTP-21	159	Chip	10	Brown garnet-rich exoskarn; 10% 1/8- to 1/4-in.-wide quartz stringers; chip extends 10 ft from portal on east rib of trench, but represents only 3.5 ft of tactite zone thickness.
CTP-22	169	Chip	1.5	Greenish gouge and blocky quartzite inclusions from N25E-striking (dip 55W) fault zone; from NE face of 6-ft-deep south shaft-start.
CTP-23	169	Chip	1.3	Hornblende quartz gneiss (metamorphosed argillaceous sandstone); from NE face of south shaft-start, directly over fault zone.
CTP-24	169	Select grab	NA	Light gray quartzite with limonite- and malachite-stained surfaces; from dump of north shaft and trench.
CTP-25	167	Random chip	NA	Bright green epidote and lesser garnet tactite at least 35 ft thick; chips extend from 35-ft-diameter pit to shaft start 200 ft N 10E of headframe.
CTP-26	172	Random chip	NA	White to light gray limestone and dolomitic limestone; beds range from laminae to a few ins. thick; unit about 200 ft thick; Crystal Pass member of the Sultan Limestone (Evans and others, 1975); strike N40E, dip 48W; from 8- by 12-ft pit in hillside west of drainage.
CTP-27	172	Random chip	NA	Dark blue-gray carbonate unit ranges from dolomite to limestone; massive, sulfurous odor on broken surfaces, and abundant crinoidal debris locally; unit about 60 ft thick; Dawn member of the Monte Cristo Limestone (Evans and others, 1975); from hillside above small pit (sample CTP-25).
CTP-28	172	Random chip	NA	Blue-gray, locally dolomitic, limestone; prominent elongate discontinuous chert nodules; somewhat sulfurous odor; about 60 ft thick; Anchor member of the Monte Cristo Limestone (Evans and others, 1975); from outcrops above CTP-27.
CTP-29	172	Random chip	NA	White to light gray limestone and lesser dolomite; medium- to coarse-grained and massive; unit about 350 ft thick; Bullion member of Monte Cristo Formation (Evans and others, 1975); from outcrops above CTP-28.
CTP-30	172	Chip	3.0	Hematite-stained lamina and joints in the blue-gray Anchor member of the Monte Cristo Limestone; some bright red stains may be cinnabar in part; strike N50E, dip 42NW; from 15-ft-long trench face about 450 ft west-southwest of trench in Sultan Limestone (CTP-26).
CTP-31	121	Chip	16.0	Light gray vein quartz, quartz breccia and chert; vuggy; strike N40E, dip 57NW; sample, taken oblique to vein, represents 2 ft of vein thickness; from across the center of face of 200-ft-long trench, below water tower.
CTP-32	122	Chip	10.0	Strongly epidotized and silicified quartz monzonite inclusion within the vein system; 15% quartz stringers and vuggy veinlets 1/4 to 5 in. thick are subparallel to main vein; taken perpendicular to the 2-ft vein (CTP-31) and from the hanging wall, the chips represent 10 ft of vein system thickness.
CTP-33	121	Grab	NA	Fine-grained gray quartz and highly silicified quartz monzonite that looks like quartz (ratio 2:1); taken from center of 175-ft-long trench 600 ft N 30E of 200-ft trench by water tower.



Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CTP-34	117	Chip	0.8	A 10-in.-thick bed (or vein) of light gray gneissic quartzite; strike N50W, dip 90; sandwiched by two 12-in.-thick zones; from 18-ft-deep northwest shaft.
CTP-35	117	Chip	2.0	Coarse black biotite schist (two 1-ft segments from both sides of quartzite); from 18-ft-deep northwest shaft.
CTP-36	117	Chip	4.0	Coarse black biotite schist; strike N30W, dip 80W; joint set N65E, dip 53S; from north face of 22-ft-deep southwest shaft (680 ft southeast of northwest shaft).
CTP-37	150	Grab	NA	Limonite-stained and propylitically altered light green (from epidote) Teutonia quartz monzonite; from pit in center of bulldozed area.
CTP-38	171	Chip	3.0	Approximately 1-cm-thick beds of limonitic chert; the beds strike N20W and dip 64NE; the chert zone is within buff-white limestone, and appears to be only a few feet above dark blue-gray dolomite; breccia with a hematitic and siliceous matrix occurs in limestone at the base of the zone and appears to have been formed by solution collapse; brecciation at the top of the zone may be tectonic.
CTP-39	171	Select grab	NA	Deep red hematitic chert; from dump.
CTP-40	170	Select grab	NA	Silicified limestone and mylonite, quartz with local malachite staining, and greenish fault gouge; from dump of main 25-ft-deep inclined shaft.
CTP-41	170	Grab	NA	Black slate (70%) and brown-stained cherty fine-grained quartzite; from 150-ft-long bulldozer cut in Pioche Shale (no certain outcrop).
CTP-42	170	Grab	NA	Black (80%) and brown (20%) hard, blocky, well lithified slate; from 150-ft cut.
CTP-43	170	Grab	NA	Medium gray dolomitic limestone; commonly stained reddish brown on fractures, surfaces and some bedding planes; from 12-ft-deep shaft.
CTP-44	168	Grab	NA	Light greenish gray slate, commonly somewhat phyllitic and micaceous; cleavage surfaces appear to parallel bedding, strike N12W, dip 56SW, and are stained with limonite, goethite, and lesser manganese stains, including dendrites; from small pit.
CTP-45	210	Chip	12	Highly fractured, propylitized (light green epidote and chlorite), silicified and limonite-stained medium- to coarse-grained Teutonia quartz monzonite; 10-20% white quartz veins from 1/4-in.- to 7-ins.-thick; structural fabric, joints, shears and veins strike N55W and dip 90 to 77NE; the sample, which appears to span the main mineralized zone, was taken from the south cluster of workings across the portal of a 5-ft adit start.
CTP-46	210	Select grab	NA	Milky quartz and quartz breccia with fine black sulfides and heavy iron oxide stains along fractures; from the south cluster of workings between the adit start and 15-ft-deep shaft (false floor possible).
CTP-47	210	Select grab	NA	Milky quartz and quartz breccia with fine black sulfides and heavy iron stains along fractures and vugs, apparently after sulfide minerals; from small stockpile at northwest corner of northernmost shaft, north cluster of workings.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CTP-48	378	Pan	NA	Reconnaissance placer sample [3 level 14-in.-diameter gold pans (0.012 yds <sup>3</sup> )] of Teutonia quartz monzonite pseudomorph regolith; from T-shaped trench.
CTP-49	377	Chip	4.0	Mainly iron-stained quartz vein with rafted blocks of epidotized quartz monzonite (20%); Strike N43W, dip 85W; taken from outcrop 80 ft N20W of 6-ft-deep shaft start.
CTP-50	377	Chip	2.5	Mineralized shear zone contains 50% quartz veins of varied thicknesses and 50% coarse-grained epidotized quartz monzonite; from inclined shaft site 230 ft northwest of the Perry (west) residence.
CTP-51	377	Chip	6.0	Mineralized zone composed of 15% quartz and 85% epidotized quartz monzonite; strike N-S, dip 20E; taken at second, northwesternmost shaft.
CTP-52	374	Chip	5.0	Brecciated and gougy zone in argillaceous fine-grained sandstone; massive at the footwall becoming thin-bedded at the hanging wall; heavy manganese staining; strike N55E, dip 55E; taken at portal of main inclined shaft.
CTP-53	374	Select grab	NA	Hematite-, limonite-, and manganese-stained fine-grained argillaceous sandstone, with very fine-grained black (silver?) sulfides; from stockpile, northeast end of trench extending from 26-ft adit.
CTP-54	374	Chip	0.3	Four-in.-thick gougy fault zone; strike N40E, dip 38E; from northeast corner of inclined shaft.
CTP-55	137	Chip	5.0	A gray limestone bed characterized by solution collapse breccia with a hematite-stained siliceous matrix; strike N 17W, dip 47E (variable); from west rib of north adit trench.
CTP-56	137	Chip	4.5	Hematite-colored (20% light gray and 15% limonite-colored) argillite with slaty partings, probably along bedding planes, 1/8 th-in.- to 1-in.-apart (mainly 1/4-in.-); from northeast rib of north adit trench.
CTP-57	137	Select grab	NA	Hematite-stained silicified dolomite (5% of dump) and hematite- and limonite-stained argillaceous and calcareous sandstone; most of dump is cherty medium-gray dolomite.
CTP-58	373	Chip	4.0	Hydrothermally altered (limonite > hematite > cinnabar stains) biotite hornblende gneiss; three gneissosity-bound 4-ft-thick zones, separated by 2 to 4 ft of less altered gneiss, strike N74W, and dip 28NE; sample from north side of wash, 2000 ft N30E of shack on claim block.
CTP-59	373	Chip	2.0	Two-ft-wide fault zone strikes N42W and dips 85NE through altered gneiss; 50% quartz vein and 50% gouge; from east rib of adit start, south cluster of three pits.
CTP-60	373	Chip	6.0	Hydrothermally altered and pervasively limonite-, hematite-, and cinnabar-stained gneiss; gneissosity strikes N55W, dip 20N; vertical chip from west rib of adit start, south cluster of pits.
CTP-61	373	Chip	12.0	Moderately to very highly altered biotite gneiss; 10% quartz; limonite, hematite and extensive cinnabar stains; from southwestern-most of middle cluster of pits.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CTP-62	160	Select chip	NA	Limestone solution collapse breccia, 40% gray limestone clasts and 60% hematite-stained matrix; from Center, NW 1/4, Sec 13, T15 N, R13E.
CTP-63	143	Select grab	NA	Malachite-stained tactite; adjacent iron-stained intrusive crops-out upslope; from small stockpile by 10-ft shaft, 800 ft east of stratabound mineralization on the same claim block.
CTP-64	143	Chip	2.0	Buff-white dolomitic limestone and solution collapse breccia with iron-stained cherty and calcareous matrix; from 10 ft above drainage on south side.
CTP-65	143	Select grab	NA	Black to dark brown cinder-like vuggy material with some limonite stains; from stockpile at drainage near open adit.
CTP-66	143	Chip	2.0	Iron-oxide-stained dark brown cherty material, appears to be stratabound; may be thicker than exposed 2 ft; from mouth of partially open stope.
CTP-67	178	Chip	2.0	Lowest 2 ft of highly mineralized hanging wall block of main N20W, westward dipping thrust fault; highly silicified iron-, malachite-, and cinnabar-stained Teutonia quartz monzonite; from north face of open-pit.
CTP-68	178	Random chip	NA	Silicified and propylitized quartz monzonite above the lowest 2 ft of hanging wall block of main N20W, westward dipping thrust fault; from north face of open-pit.
CTP-69	178	Random chip	NA	Light grayish green intensely propylitized quartz monzonite from foot wall block of main N20W, westward dipping thrust fault; from north face of open-pit.
CTP-70	137	Random chip	NA	Gray limestone breccia with small blocky, commonly unrotated, clasts; pastel pink matrix is proportionally smaller constituent than clasts; appears to be a tectonic, joint set-related breccia.
CTP-71	134	Chip	0.3	Two- to 4-in.-wide milky quartz vein strikes N50W, dips 90-85W, and has goethite and malachite stains on planar boundaries; country rock is black and white hornblende biotite gneiss, but outcrops downslope indicate quartz monzonite is within 50 ft of surface; from face of south trench.
CTP-72	134	Random chip	NA	Hornblende biotite gneiss; gneissosity strikes N50W, dips 30W; gneiss and quartz vein cut by fault (5 in. calcareous gouge) striking N30E, dip 60E; from face of south trench.
CTP-73	134	Chip	4.0	Brecciated quartz monzonite, and 10% fractured 1-in. quartz veins, formed by intersecting joint and shear sets; heavy limonite staining and interstitial whitish gouge, but clasts are not fully recemented; from east face of north trench.
CTP-74	134	Chip	0.3	One 2-in.-, and 1, 1-in.-wide parallel quartz vein, 22 ins. apart, strike N55W and dip 90W, within altered gneiss (gneissosity strikes N20W, dips 65W); from west face of north pit.
CTP-75	376	Grab	NA	Red volcanic cinders (includes about 20% black); < 1/4-in. size category; from stockpile at Aiken mine.
CTP-76	376	Grab	NA	Black volcanic cinders (includes about 5% red); < 1/4-in. size category; from stockpile at Aiken mine.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CTP-77	160	Random chip	NA	Thinly cross-laminated iron-stained gneissic argillaceous (hornblende biotite) quartzite; gneissosity, and probable bedding, strikes N12E and dips 35W; from northwest tip of Striped Mountain.
CTP-78	160	Random chip	NA	Iron-stained quartzite; strike N40W, dip 40W; joint set strikes N78E, dips 82N; from west edge of the Mescal Range.
CTP-79	160	Chip	4.0	Buff-white limonite-stained calcareous and cherty siltstone; strike N20W, dip 45W; overlain by white dolomitic limestone and underlain by dark blue calcareous dolostone; taken from NW1/4, NW1/4, NW1/4, Sec 34, T16N, R13E.
CTP-80	160	Random chip	NA	Dark blue-gray calcareous dolostone; taken from below CTP-79.
CTP-81	160	Random chip	NA	Buff white cherty dolomitic limestone; taken above CTP-80.
CTP-82	133	Channel	1.0	Predominantly fine-grained alluvial sand; taken from a 1- to 2-ft depth at northwest corner of a 600- by 20- by 3-ft-deep trench; taken near center of explored 10-acre area (including 72, 20-ft-deep auger holes and one 300-ft rotary hole) outside study area in northern extension of claim block (C, Sec 13, T16N, R11E).
CTP-83	133	Channel	1.0	Duplicate of CTP-82 taken for alternative analytical methods.
CTP-84	133	Random chip	NA	White siliceous and calcareous sinter; taken outside study area in northern extension of claim block under powerline, northwest corner Sec 6, T15N, R12E.
CTP-85	133	Grab	NA	Predominantly fine-grained alluvial sand; taken from drill cuttings from several holes along north-south unimproved road, C, W1/2, W1/2, Sec 28, T15N, R12E.
CTP-86	133	Grab	NA	Duplicate of CTP-82 taken for alternative analytical methods.
CTP-87	142	Chip	3.0	Iron-stained dacite dike or sill; appears to be stratigraphically between lower dark blue limy dolomite and upper white dolomitic limestone; taken about 120 ft north of cave with interior adit.
CTP-88	142	Chip	1.3	Relatively unweathered portion of 10-ft-thick stratabound solution collapse breccia zone; hematite-stained matrix; zone is within buff white dolomitic limestone and several ft above blue dolostone; taken from mouth of cave with interior adit.
CTP-89	142	Random chip	NA	Dark blue-gray dolomite with discontinuous gray chert nodules; strike N22E, dip 22W.
CTP-90	142	Random chip	NA	Buff white dolomitic limestone.
CTP-91	139	Chip	3.5	Geothite-stained cherty kaolinized zone, possibly palagonite, between base of 2- to 4-ft-thick basalt flow (or sill or dike) and underlying dark blue-gray limy dolomite; taken from north face of upper bench of open-pit.



Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CTP-92	139	Chip	5.0	Vertical chip across dark blue limy dolostone breccia (no white carbonate rock observed at this locality); dolostone appears to strike N82E and dip 27S; breccia clasts appear to be largely square-set unrotated blocks; the geothite matrix makes up only about 20% of the silicified facies, which appears to be tectonic, possibly related to emplacement of the basalt; taken from north face of lower bench.
CTP-93	138	Chip	2.0	Medium gray strongly sulfurous dolomitic limestone with alternate light and dark laminae; strike N12E, dip 27W.
CTP-94	138	Chip	4.5	Charcoal gray, weakly sulfurous, silicified and commonly brecciated carbonate rock; a prominent joint set strikes N35W and dips 85E.
CTP-95	138	Select grab	NA	Highly geothitic and silicified material from dump; not seen in place, probably mined from a discontinuous pocket.
CTP-96	140	Chip	0.8	Medium gray thinly bedded (to 3-in.-, but mainly less than 0.5-in.-thick) dolomitic limestone; very thin (<0.5 mm) hematitic mineralization coats bedding planes, and worm burrows commonly visible along bedding planes when split; strike N20E, dip 25W; mineralization also lines joints; taken from face of shaft-platform cut.
CTP-97	140	Select grab	NA	Dolomitic limestone solution collapse breccia with hematite-stained matrix, and lesser hematite-stained limestone (10%); sample weighted toward matrix material (70%); taken from dump.
CTP-98	141	Select grab	NA	Dolomitic limestone breccia with fairly dark gray clasts and a hematitic matrix; strike N3E, dip 27W; shaft collars in light gray limestone, but dark gray limestone crops-out 15 to 20 ft below dump; taken from dump.
CTP-99	133	Channel	1.0	Predominantly fine-grained alluvial sand; taken from a 1- to 2-ft depth from C, N1/2, Sec 3, T15N, R12E.
CTP-100	133	Channel	1.0	Duplicate of CTP-99 taken for alternative analytical methods.
CTP-101	996	Channel	1.0	Predominantly fine-grained alluvial sand; taken from a 1- to 2-ft depth from C, SW1/4, Sec 9, T15N, R12E.
CTP-102	996	Channel	1.0	Duplicate of CTP-101 taken for alternative analytical methods.
CTP-103	133	Channel	1.0	Predominantly fine-grained alluvial sand; taken from a 1- to 2-ft depth from C, Sec 21, T15N, R12E.
CTP-104	133	Channel	1.0	Duplicate of CTP-103 taken for alternative analytical methods.
CTP-105	133	Channel	1.0	Predominantly fine-grained alluvial sand; taken from a 1- to 2-ft depth from C, N1/2, N1/2, Sec 33, T15N, R12E.
CTP-106	133	Channel	1.0	Duplicate of CTP-105 taken for alternative analytical methods.
CTP-107	131	Grab	NA	Red volcanic cinders (includes about 20% black); < 1/4-in. size category; from stockpile at Cima mine.
CTP-108	131	Grab	NA	Black volcanic cinders (includes about 5% red); < 1/4-in. size category; from stockpile at Cima mine.



Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CTP-109	372	Chip	1.5	A 1- and a 0.5-ft-wide white pegmatite dike on the south and north ribs of the east adit trench, respectively, strike N40W and dip 62SW through gneiss; the pegmatite is faulted off 7 ft inside of adit, fault strikes N55E and dips 67W.
CTP-110	372	Random chip	NA	Biotite granite gneiss, with thinly laminated gneissosity (strike N70-80E, dip 50-70N); taken on the south and north ribs of the east adit trench.
CTP-111	372	Chip	2.0	Two-ft-wide shear zone, half quartz and half gouge, strikes N 50W and dips 80SW along the 100-ft-long southeast trending adit; gneissosity in country rock strikes N35W and dips 40W; sample taken from back (ceiling) at portal.
CTP-112	372	Grab	NA	Mafic finely laminated gneiss (50%), strike N45E, dip 55NW, and irregularly shaped pods of red iron-stained granite; taken from small pit 100 ft south of west adit.
CTP-113	373	Chip	2.0	Limonite-stained gneissic quartzite and 10% gouge within a shear zone, with shear planes of many orientations; the most prominent shear planes strike N60E and dip 50S; gneissosity appears to strike N40E and dip 72W; taken about 100 ft southwest of shack.
CTP-114	122	Random chip	NA	Coarse-grained porphyritic biotite quartz monzonite with 12-15-cm pink feldspar phenocrysts. Joints strike: N33W, dip 70W; N68W, dip 90; and N80E, dip 57N. Taken from 20-ft trench on east side of unimproved road.
CTP-115	122	Chip	3.0	Locally limonite-stained and gouggy weathered quartz monzonite from a weak shear zone developed along the N83E (dip 67N) joint set; taken in trench east of road.
CTP-116	122	Chip	10	Weathered quartz monzonite; about 50% is highly epidotized and gouggy; taken at northwest pit, about 800 ft N40W east pit.
CTP-117	122	Grab	NA	Silicified quartz monzonitic porphyry with an aphanitic groundmass; appears to overlie epidotized zone; from northwest pit.
CTP-118	124	Chip	2.8	Weak shear zone in coarse-grained quartz monzonite; no prominent slickensides, monzonite clasts are largely unrotated, and intrazonal joints have many orientations; kaolinitic gouge and iron-stains line joints in the zone; zone strikes N66W and dips 66S; taken from east end of 20-ft trench, 0.4 mi north of main shaft.
CTP-119	124	Random chip	NA	Milky quartz and quartz breccia; iron staining lines fractures and vugs; jointing strikes N30E, dip 90; taken from 30-ft-diameter, roughly circular quartz blowout 200 ft south of main shaft.
CTP-120	124	Select grab	NA	Milky quartz, quartz breccia, and fault gouge; iron-staining along fractures and vugs in quartz; the apparent source of the material is a 2-ft-wide shear zone, strike N60W, dip 90; taken from dump at 45-ft-deep shaft.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CTP-121	121	Chip	5.0	Laminated quartz vein; vuggy, with open-space-filling by crystals common; calcite and siderite are common accessory minerals; vein strikes N30E, dips 40E; additional 2 ft of vein above, and 3 ft below sampled interval; taken from south rib of inclined shaft portal, 50 ft north of unimproved access road that parallels Interstate 15.
CTP-122	121	Chip	1.0	Alternate 1/4- to 1/2-in. bands of quartz and siderite in 1-ft of exposed vein in large trench; 0.2 mi N30E of CTP-121.
CTP-123	120	Random chip	NA	Highly silicified light gray granite, granite gneiss, and biotite schist; epidotized in part, schist commonly malachite-stained where epidotized; from 20-ft trench southeast of shaft.
CTP-124a	375	Placer grab	NA	A 0.006-yd <sup>3</sup> sample of alluvium composed of granitic and basaltic detritus and concentrated on a laboratory-size Wilfley table; no free gold or other precious metals were found. A split of the concentrates (c) and a split of the midlings and tailings (mt) were each geochemically analyzed. Sample from N1/2, NW1/4, NW1/4, Sec 23, T13N, R11E.
CTP-124b	375	Placer grab	NA	Described above (CTP-124c).
CWC-1	312	Chip	3	Heavily iron- and manganese-oxide stained granitic rock.
CWC-2	312	Chip	2.5	Silicified shear zone in granitic rock.
CWC-3	313	Chip	3	Rhyolite tuff breccia heavily altered to clay minerals.
CWC-4	308	Chip	6	Quartz and potassium feldspar pegmatite zone.
CWC-5	311	Select	NA	Hard, white clay with splotches of green and pink coloration.
CWC-7	315	Chip	8	Friable, white clay with scattered lithic fragments.
CWC-8	315	Chip	4	White clay containing lithic fragments.
CWC-9	317	Select	NA	Silicified, chalcedony breccia with heavy iron-oxide staining on fracture surfaces.
CWC-10	316	Select	NA	Silicified, iron-oxide stained chalcedony breccia.
CWC-11	316	Select	NA	Rhyolite tuff breccia which is partly silicified and altered to clay minerals.
CWC-12	314	Select	NA	Rhyolite tuff breccia with some alteration to clay minerals.
CWC-13	331	Chip	3	White siliceous material with some green and pink patches in zones of clay alteration.
CWC-14	422	Select	NA	Cobbles from gravel beds containing dark quartz vein material.
CWC-15	263	Chip	NA	Shear zone in mafic gneiss.
CWC-16	230	Select	NA	Silicified zone along fault contact between granitic intrusive rock and granite gneiss containing narrow quartz veins with seams and stringers of hematite.
CWC-17	230	Chip	2	Shear zone in moderate-to-heavy, iron-oxide stained granite gneiss.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CWC-18	307	Select	NA	Gray perlite with sparse iron-oxide staining
CWC-19	252	Chip	.5	Quartz vein in silicified rhyolite.
CWC-20	239	Select	NA	Granite gneiss containing red garnet crystals.
CWC-22	256	Chip	3	Skarn zone along carbonate rock contact.
CWC-23	256	Select	NA	Copper minerals occur in a skarn zone along carbonate rock contact.
CWC-24	257	Select	NA	Copper minerals occur in silicified zones in carbonate rock.
CWC-25	237	Select	NA	A quartz vein occurs along a shear zone in amphibole schist.
CWC-26	237	Select	NA	A quartz vein occurs along a shear zone in amphibole schist.
CWC-27	238	Select	NA	An iron-oxide-stained quartz vein occurs in granite gneiss.
CWC-28	236	Select	NA	A shear zone in granite gneiss contains quartz veins.
CWC-29	235	Select	NA	Heavily iron-oxide stained quartz vein in granite gneiss.
CWC-30	235	Select	NA	do
CWC-31	280	Select	NA	Rhyolite breccia cemented by iron-oxide- stained matrix.
CWC-32	279	Chip	2	Quartz vein in amphibole schist.
CWC-33	253	Select	NA	Heavily iron-oxide-stained shear zone in granite schist.
CWC-34	254	Select	NA	Quartz vein in granite gneiss.
CWC-35	251	Select	NA	Heavily iron-oxide-stained quartz vein in granite gneiss.
CWC-36	254	Chip	1	A massive quartz vein occurs in clay altered granite gneiss.
CWC-37	245	Chip	2	A shear zone in granite gneiss contains clay gouge and quartz veins.
CWC-38	250	Select	NA	Iron-oxide-stained quartz vein in granite gneiss.
CWC-39	249	Select	NA	Iron-oxide-stained granite gneiss.
CWC-40	248	Select	NA	Heavily iron-oxide-stained granite gneiss.
CWC-41	246	Select	NA	Yellow-red gossan in shear zone.
CWC-42	244	Select	NA	Milky, iron-oxide-stained quartz vein material along a contact between amphibole schist and granite gneiss.
CWC-43	243	Select	NA	Iron- and manganese-oxide-stained granite gneiss.
CWC-44	242	Select	NA	Chloritic altered amphibole schist with moderate silicification.
CWC-45	241	Select	NA	Milky quartz vein with seams of hematite occurs along a fault contact between granite gneiss and amphibole schist.
CWC-46	240	Select	NA	Copper minerals occur in a milky quartz vein occurring in granite gneiss.

Table A-1 Descriptions of rock samples from the East Mojave  
National Scenic Area, San Bernardino County, CA--Cont.  
(NA, Not Applicable)

Sample No.	Map No.	Sample Type	Sample Length (ft)	Description
CWC-47	228	Select	NA	A shear zone in granitic rock is silicified and iron-oxide-stained.
CWC-49	319	Select	NA	White clay.
CWC-50	320	Select	NA	Iron-oxide-stained sandstone with rhyolitic clasts.
CWC-51	219	Select	NA	Iron- and manganese-oxide-stained quartz vein from shear zone in granite gneiss.
CWC-52	218	Select	NA	Fault zone in granite gneiss contains sparse copper minerals.
CWC-53	218	Select	NA	Silicified granite gneiss is moderately to heavily iron oxide stained.
CWC-54	221	Select	NA	Quartz vein breccia occurs in granite gneiss.
CWC-55	221	Select	NA	Clear, vuggy, iron-oxide-stained quartz vein occurs along the margin of a mafic dike in granite gneiss.
CWC-56	225	Select	NA	Heavily iron- and manganese-oxide-stained quartz vein occurs in a mafic dike.
CWC-57	222	Select	NA	Dark gray quartz vein occurs in iron-oxide-stained granite gneiss.
CWC-58	225	Select	NA	Manganese-oxide-stained quartz veins contains seams of hematite and cubic vugs left by weathered galena(?).
CWC-59	225	Select	NA	Silicified quartz breccia with iron-oxides and galena in the matrix.
CWC-60	226	Select	NA	Quartz vein contains seams of hematite.
CWC-61	225	Select	NA	do
CWC-62	224	Select	NA	Heavily silicified and iron-oxide-stained granite gneiss.
CWC-63	225	Select	NA	Quartz vein occurs in granite gneiss.
CWC-64	212	Select	NA	Fluorite vein contains sparse copper minerals.
CWC-65	214	Select	NA	do
CWC-66	329	Select	NA	Silicified rhyolite breccia.
CWC-67	329	Select	NA	do
CWC-68	329	Select	NA	do
CWC-69	309	Select	NA	Light gray perlite with sparse iron-oxide-staining along fractures.





Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CAL-01	595	<9	36	<1	370	11	<16	<5	390	<1	39	<1	n/a	1.1	4	0.8	92	<10
CAL-02	595	18	19	<12	110	<16	<5	<5	180	<1	20	<1	n/a	0.6	2	<0.2	31	<10
CAL-03	595	9	8	1	580	<5	47	<5	240	1	27	<1	n/a	0.9	21	0.3	10	<10
CAL-04	588	4560	12	1	1200	<5	45	12	190	<1	7500	<1	n/a	3.2	17	0.2	<1	33
CAL-05	588	8440	8	4	790	<5	34	7	180	<1	6300	<1	n/a	2.8	18	<0.2	3	41
CAL-06	590	2000	<2	2	120	<5	<5	<5	360	<1	n/a	<1	n/a	3.3	2	0.3	8	16
CAL-07	590	75	<2	10	110	<5	<5	13	310	<1	n/a	<1	n/a	4.2	2	0.3	11	16
CAL-08	591	4120	11	6	220	<5	17	<5	340	<1	410	<1	n/a	2.0	6	<0.2	5	<10
CAL-09	589	19300	72	4	130	<5	<14	9	370	<1	n/a	<1	n/a	2.9	2	<0.2	6	<10
CAL-10	599	33	<2	49	69	7	<12	<5	320	<1	n/a	<1	n/a	1.0	5	0.5	4	<10
CAL-11	599	12	40	<1	220	<5	<5	<5	390	<1	n/a	<1	n/a	1.0	<2	0.4	169	<10
CAL-12	599	130	18	5	340	<5	<5	<5	250	<1	17	<1	n/a	0.4	2	<0.2	104	<10
CAL-13	598	28	3	<14	180	<19	<5	<5	220	<1	61	<1	n/a	0.5	<2	0.3	147	<10
CAL-14	598	120	22	2	<50	<5	9	<5	350	<1	210	<1	n/a	0.7	3	0.4	150	11
CAL-15	599	481	51	9	110	<5	<5	<5	500	<1	1500	<1	n/a	1.0	<2	0.3	34	<10
CAL-16	593	1050	24	12	1000	<5	170	11	220	2	6200	<1	n/a	16.0	96	0.4	11	51
CAL-17	593	287	7	4	700	<5	110	230	610	2	>10000	2	n/a	10.0	38	1.8	<1	220
CAL-18	593	365	<2	2	830	<5	85	28	660	1	4000	<1	n/a	7.4	37	2.4	58	140
CAL-19	593	13	<2	10	570	<5	25	<5	240	<1	220	<1	n/a	4.5	12	2.8	<1	<10
CAL-20	594	30	<2	2	180	<5	14	<5	370	<1	n/a	<1	n/a	0.5	4	<0.2	3	<10
CAL-21	594	9	8	10	<50	<5	17	14	340	<1	7400	<1	n/a	5.2	7	0.4	202	<10
CAL-22	594	60	51	161	<50	<16	<15	<5	190	<1	200	<1	n/a	0.5	<2	<0.6	12	<10
CAL-23	594	100	17	85	150	<5	<24	<5	270	<1	58	<2	n/a	0.7	3	<0.5	7	<24
CAL-24	594	<2	4	38	<50	<5	7	<5	390	<1	78	<1	n/a	0.8	<2	<0.2	2	<10
CAL-25	594	6	8	30	110	<5	<5	<5	360	<1	n/a	<1	n/a	0.8	6	<0.2	6	<10
CAL-26	593	<2	<2	37	<50	<5	91	<5	91	2	n/a	<1	n/a	1.0	38	0.6	<1	<10
CAL-27	592	<2	<2	14	630	<5	210	24	310	<1	n/a	<1	n/a	19.0	97	1.1	<1	<10
CAL-28	594	<15	4	16	450	<19	<27	<5	420	<1	n/a	<1	n/a	0.6	9	0.7	14	<10
CAL-29	594	604	110	954	<720	<98	<120	<16	<400	<3	n/a	<10	n/a	1.4	13	<2.5	99	<91
CAL-30	588	1450	12	15	<50	<5	<5	14	430	<1	n/a	<1	n/a	2.4	<2	<0.2	3	19
CAL-31	588	14	<2	6	980	<5	53	10	190	<1	n/a	1	n/a	2.9	20	<0.2	<1	53
CAL-32	594	120	49	279	<50	<19	<33	<5	<130	<1	3500	<4	n/a	0.8	5	<0.7	65	<33
CAL-33	594	244	46	115	350	<5	<17	<5	200	<1	6700	<1	n/a	5.2	6	<0.2	19	<10
CAL-34	594	6	6	13	92	<5	<5	<5	440	<1	n/a	<1	n/a	1.1	2	<0.2	44	14
CAL-35	594	5	2	6	<50	<5	<5	<5	340	<1	n/a	<1	n/a	0.4	<2	<0.2	4	<10
CAL-36	594	<220	597	1360	<1500	<200	<260	<37	<900	<6	9200	<23	n/a	<2.1	10	<5.6	<39	<200
CAL-37	594	22	34	11	92	<5	<5	<5	340	<1	76	<1	n/a	0.3	<2	<0.2	19	<10
CAL-38	594	560	286	43	<120	<11	<19	<5	210	<1	930	<1	n/a	0.6	<2	<0.2	120	<21
CAL-39	594	10	3	13	<50	<5	<10	<5	240	<1	n/a	<1	n/a	0.5	5	<0.2	28	<10
CAL-40	594	93	4	65	180	<5	32	<5	450	<1	n/a	<1	n/a	1.6	15	0.2	8	<10
CAL-41	594	8	<2	25	1100	<5	39	<5	190	2	n/a	2	n/a	1.0	19	<0.2	5	<10

Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CAL-42	594	<8	<2	62	390	<5	38	<5	180	<1	n/a	<1	n/a	1.8	14	0.3	15	<10
CAL-43	594	42	55	46	390	<20	<37	<5	380	<1	n/a	<2	n/a	0.9	2	1.4	10	<25
CAL-44	594	2290	19	8	<50	<5	<5	<5	390	<1	n/a	<1	n/a	0.5	3	<0.2	79	<10
CAL-45	594	10	4	2	92	<5	<5	<5	460	<1	65	<1	n/a	1.6	<2	<0.2	118	<10
CAL-46	594	32	18	18	100	<5	<5	<5	290	<1	2500	<1	n/a	0.6	3	<0.2	14	<10
CAL-47	594	6	<2	<1	360	<5	14	<5	320	1	n/a	<1	n/a	0.7	9	<0.2	7	<10
CAL-48	594	<2	4	<1	440	<5	<5	<5	390	<1	n/a	<1	n/a	0.5	4	<0.2	10	<10
CAL-49	594	2	<2	<1	78	<5	<5	<5	380	<1	n/a	<1	n/a	0.5	<2	<0.2	1	<10
CAL-50	594	12	7	3	240	<5	13	<5	350	<1	n/a	<1	n/a	2.2	8	<0.2	8	<10
CAL-51	596	3	5	1	210	<5	7	<5	440	<1	n/a	<1	n/a	0.8	4	<0.2	20	<10
CAL-52	596	30	22	2	120	<5	<5	<5	430	<1	n/a	<1	n/a	0.6	<2	<0.2	140	<10
CAL-53	596	24	6	3	920	<5	54	<5	250	1	n/a	<1	n/a	0.8	23	<0.2	13	<10
CAL-55	596	8660	263	112	<200	<18	<37	<5	390	<1	2300	<3	n/a	1.4	<2	<0.7	244	<30
CAL-56	596	73	4	21	520	<5	36	<5	180	2	58	<1	n/a	1.4	21	<0.2	4	<10
CAL-57	596	860	49	54	130	<5	<15	<5	320	<1	1440	<1	n/a	1.2	<2	<0.2	113	<10
CAL-58	594	13700	2130	82	<210	<21	<35	<5	220	<1	3600	<3	n/a	0.8	2	0.9	258	<34
CAL-59	594	89	46	2	53	<5	<5	<5	320	<1	n/a	<1	n/a	1.2	<2	<0.2	22	<10
CAL-60	596	24	4	2	420	<5	28	<5	220	<1	n/a	<1	n/a	0.7	11	<0.2	44	<10
CAL-61	596	8	<2	5	370	<5	17	<5	260	1	n/a	<1	n/a	0.6	8	<0.2	28	<10
CAL-62	594	18	5	2	1100	<5	50	<5	130	4	n/a	<1	n/a	1.1	24	<0.2	3	26
CAL-63	594	20	<2	6	730	<5	38	<5	220	2	n/a	<1	n/a	2.6	22	<0.2	132	<10
CAL-64	596	347	75	29	180	<5	<10	<5	220	<1	400	<1	n/a	1.5	<2	<0.2	249	<10
CAL-65	596	507	170	104	580	<14	<26	<5	140	<1	>10000	<2	n/a	0.7	2	<0.5	66	<21
CAL-66	596	9	5	2	280	<5	23	<5	280	<1	n/a	<1	n/a	0.7	10	<0.2	7	<10
CAL-67	596	4	<2	3	770	<5	35	11	170	1	n/a	<1	n/a	0.5	13	<0.2	8	<10
CAL-68	596	8	<2	2	280	<5	22	<5	260	<1	n/a	<1	n/a	0.6	10	<0.2	54	<10
CAL-69	592	5	<2	<1	180	<5	22	<5	230	<1	51	<1	n/a	0.7	11	<0.2	2	<10
CAL-70	592	140	<2	2	970	13	140	8	130	2	n/a	<1	n/a	2.6	60	0.5	<1	<10
CAL-71	592	521	<2	3	1000	10	170	8	120	3	n/a	<1	n/a	3.3	74	0.5	<1	<10
CAL-72	592	110	<2	24	1000	<5	37	21	140	3	n/a	<1	n/a	3.4	19	<0.2	4	49
CAL-73	592	470	18	4	950	<5	34	23	120	<1	>10000	<1	n/a	5.6	19	0.2	5	23
CAL-74	592	662	3	4	290	<5	45	97	77	<1	>10000	<1	n/a	11.0	20	0.5	2	35
CAL-75	592	14	<2	1	1100	<5	140	13	150	2	n/a	2	n/a	4.1	62	0.4	<1	46
CAL-76	592	10	<2	2	200	<5	25	<5	220	<1	n/a	<1	n/a	1.7	17	<0.2	8	<10
CAL-77	592	8	<2	1	360	<5	63	7	200	1	n/a	<1	n/a	2.1	29	0.3	<1	<10
CAL-78	592	11	<2	7	93	<5	130	<5	240	<1	42	<1	n/a	5.5	55	1.3	3	<10
CAL-79	592	784	4	4	<50	<5	13	<5	170	<1	n/a	<1	n/a	1.1	4	<0.2	9	<10
CAL-80	592	10	<2	1	660	<5	48	<5	270	1	n/a	<1	n/a	0.8	21	0.3	<1	20
CAL-81	596	742	80	14	86	<5	<5	<5	260	<1	2600	<1	n/a	1.0	<2	<0.2	486	<10
CAL-82	596	180	28	5	380	<5	20	<5	240	<1	250	<1	n/a	0.6	8	<0.2	538	<10
CAL-83	596	15	9	3	66	<5	<5	<5	260	<1	90	<1	n/a	0.5	2	<0.2	412	<10
CAL-84	596	2910	150	105	320	<14	45	<5	<76	<1	n/a	<2	n/a	3.5	23	<0.4	405	33

Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CAL-85	596	1290	73	61	290	<5	23	<5	320	<1	n/a	2	n/a	1.7	9	<0.2	168	<10
CAL-86	594	26	5	3	87	<5	18	<5	260	<1	n/a	<1	n/a	0.8	9	<0.2	22	<10
CAL-87	594	12	61	1	110	<5	<5	<5	390	<1	32	<1	n/a	0.6	<2	<0.2	5	<10
CAL-88	596	201	110	24	8910	<5	<12	<5	250	<1	n/a	3	n/a	0.4	4	<0.2	7	<10
CAL-89	596	31	3	3	150	<5	7	<5	280	<1	10	<1	n/a	0.5	2	<0.2	3	<10
CAL-90	594	6	4	3	230	<5	23	<5	320	1	n/a	<1	n/a	1.2	11	<0.2	23	<10
CAL-91	596	284	358	29	<50	<5	<16	<5	280	<1	960	<1	n/a	0.4	5	<0.2	140	<10
CAL-92	596	2190	24	21	28400	<5	<11	<5	270	<1	2700	<1	n/a	1.3	<2	0.3	36	<10
CAL-93	592	38	<2	2	730	<5	100	<5	240	<1	n/a	<1	n/a	1.3	47	<0.2	48	<10
CAL-94	592	7	<2	4	730	<5	68	<5	200	<1	n/a	<1	n/a	1.4	34	<0.2	28	<10
CAL-95	592	40	<2	2	140	<5	11	<5	330	<1	n/a	<1	n/a	0.5	4	<0.2	41	<10
CAL-96	592	3	8	21	1400	<5	85	7	150	<1	n/a	<1	n/a	4.5	37	<0.2	8	<10
CAL-97	592	4	<2	<1	1700	<5	13	<5	94	1	n/a	<1	n/a	0.5	6	<0.2	<1	<10
CAL-98	592	130	<2	1	1400	<5	120	7	110	1	n/a	<1	n/a	2.0	49	0.5	<1	<10
CAL-99	592	4	3	1	880	<5	120	8	220	1	n/a	<1	n/a	2.5	53	0.6	<1	18
CAL-100	592	<2	<2	1	1200	<5	140	30	110	<1	n/a	2	n/a	6.9	58	0.5	<1	44
CDC-01	211	8430	17	42	65	14	55	10	240	5	2000	<1	n/a	3.2	26	1.4	6	37
CDC-02	211	13000	16	349	<50	7	<16	<5	210	3	n/a	<1	n/a	11.0	8	0.8	69	29
CDC-03	211	3670	4	3	470	34	110	<5	230	1	n/a	<1	n/a	2.4	43	0.6	14	<10
CDC-04	207	66	<2	6	450	<5	110	16	190	2	n/a	<1	n/a	5.3	50	0.9	4	23
CDC-05	207	579	34	4	320	<5	80	8	190	2	>10000	<1	n/a	2.1	37	2.0	<1	18
CDC-06	208	6	<2	1	470	<5	140	<5	140	2	n/a	<1	>10000	1.6	61	1.0	<1	<10
CDC-07	208	6	<2	1	87	<5	41	<5	170	2	n/a	<1	n/a	0.7	12	0.9	<1	<10
CDC-08	206	20	2	3	1300	<5	110	<5	110	2	n/a	1	n/a	1.4	50	0.5	<1	<10
CDC-09	206	180	<2	27	670	<5	120	9	140	3	n/a	<1	n/a	4.3	53	1.0	2	<10
CDC-10	205	701	<2	2	190	<5	56	7	300	1	n/a	<1	n/a	0.8	23	0.4	<1	<10
CDC-11	204	483	37	14	130	<5	47	6	210	4	n/a	1	n/a	3.2	20	0.6	12	<10
CDC-12	204	5	<2	2	460	<5	120	<5	190	5	n/a	1	n/a	2.9	54	0.9	<1	<10
CDC-13	203	8	<2	22	390	<5	49	52	110	20	n/a	1	n/a	12.0	20	0.9	3	110
CDC-14	203	6310	<2	3	500	<5	120	<5	180	2	n/a	<1	n/a	1.5	50	1.0	4	<10
CDC-15	203	328	<2	2	270	<5	110	<5	200	15	n/a	<1	n/a	1.5	44	0.8	2	<10
CDC-16	203	5900	16	29	230	<5	85	100	180	3	n/a	<1	n/a	7.0	42	1.7	9	43
CDC-17	203	79	<2	4	690	<5	140	<5	130	3	n/a	<1	n/a	1.9	57	0.7	2	<10
CDC-18	178	7	3	1	470	<5	83	<5	270	2	n/a	<1	n/a	0.9	33	0.8	<1	<10
CDC-19	178	27	<2	1	330	<5	130	<5	68	5	n/a	<1	n/a	0.8	54	0.6	<1	<10
CDC-20	178	392	3	2	300	<5	110	<5	180	3	n/a	<1	n/a	2.3	48	0.7	<1	18
CDC-21	178	315	<2	3	450	<5	110	30	180	4	n/a	<1	n/a	3.2	48	1.0	<1	<10
CDC-22	202	29100	77	107	450	<5	<25	48	230	<1	830	<1	n/a	5.0	8	0.7	17	<10
CDC-23	202	2890	40	23	840	<5	180	<5	220	3	5900	1	n/a	1.9	84	0.9	<1	<10
CDC-24	202	887	<2	7	910	<5	180	<5	120	2	n/a	<1	n/a	2.1	89	0.3	<1	<10
CDC-25	202	321	4	10	740	11	170	<5	130	6	n/a	<1	n/a	1.9	73	0.6	2	15
CDC-26	202	9840	6	11	310	<5	96	6	340	3	n/a	<1	n/a	2.5	44	0.4	<1	<10

Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CDC-27	178	23	<2	4	360	<5	140	<5	270	3	n/a	<1	n/a	1.6	57	0.7	<1	<10
CDC-28	181	2290	33	1	480	<5	85	<5	210	1	2200	<1	n/a	1.5	33	0.8	<1	<10
CDC-29	180	2350	34	<1	320	<5	130	<5	150	3	n/a	<1	n/a	2.4	53	0.7	<1	<10
CDC-30	180	48	<2	2	290	<5	180	<5	180	3	n/a	<1	n/a	1.9	80	1.4	<1	<10
CDC-31	178	21	<2	2	140	<5	98	<5	270	3	n/a	<1	n/a	0.8	23	1.6	<1	<10
CDC-32	180	38	<2	2	330	<5	130	7	170	2	n/a	<1	n/a	1.6	52	0.9	<1	<10
CDC-33	182	4730	3	17	270	<5	45	110	310	2	n/a	<1	n/a	5.0	23	0.7	2	24
CDC-34	182	9700	15	6	310	<5	<16	19	240	1	n/a	<1	n/a	4.3	5	2.0	31	<10
CDC-35	182	13200	12	3	<50	200	<18	<5	420	<1	650	<1	n/a	5.5	6	1.0	6	<10
CDC-36	182	30200	467	4	<160	2350	<34	27	<89	<2	>10000	<1	n/a	6.0	6	2.5	<5	<50
CDC-37	179	58	<2	4	190	12	110	10	220	4	n/a	<1	n/a	1.9	58	1.0	<1	65
CDC-38	179	9710	4	6	190	<5	86	17	290	15	n/a	<1	n/a	4.5	42	1.4	3	35
CDC-39	179	420	15	3	300	17	110	<5	280	2	2600	1	n/a	2.7	48	1.0	1	<10
CDC-40	177	836	47	111	<50	<5	<14	40	66	1	>10000	<1	n/a	59.1	<2	3.2	<3	<22
CDC-41	177	5100	455	3420	<250	<150	33	<5	<91	<1	>10000	<4	n/a	8.9	52	<1.4	45	<33
CDC-42	177	391	44	7	<50	150	<5	80	110	<1	>10000	<1	n/a	11.0	<2	0.3	92	39
CDC-43	177	21	2	62	780	<5	31	6	91	2	n/a	<1	n/a	12.0	14	<0.2	18	<10
CDC-44	177	205	150	466	<240	51	<22	27	40	<1	>10000	<1	n/a	12.0	5	<0.2	43	17
CDC-45	177	<2	2	18	770	<5	130	14	94	7	n/a	<1	n/a	3.9	56	<0.2	<1	31
CDC-46	177	<97	762	1060	5150	<150	82	<5	180	<2	3700	<6	n/a	2.6	36	<1.4	17	<60
CDC-47	148	<2	8	8	660	<5	150	21	210	2	n/a	3	n/a	5.5	67	1.2	<1	37
CDC-48	148	<2	<2	9	240	<5	100	15	150	4	n/a	1	n/a	4.3	39	0.4	<1	<10
CDC-49	158	26	15	127	<50	26	200	43	220	<1	n/a	2	n/a	2.1	85	0.8	522	<10
CDC-50	158	21	7	241	220	19	110	23	290	1	n/a	<1	n/a	2.3	38	<0.2	146	<10
CDC-51	156	<3200	<10	<1000	<10000	6900	7200	15	1900	5	n/a	244	n/a	11.0	52600	28.5	<1500	<76
CDC-52	156	<2	<2	5	940	<5	180	<5	160	1	n/a	1	n/a	0.6	59	<0.2	1	<10
CDC-53	157	<4	21	20	10.7%	<5	39	<5	260	3	8100	<1	n/a	1.0	17	<0.2	10	<10
CDC-54	157	<2	<2	5	580	<5	75	<5	98	4	39	<1	n/a	1.3	27	<0.2	2	<10
CDC-55	157	<32	120	397	6100	<52	30	<5	130	1	7500	<2	n/a	0.3	16	<0.4	7	<20
CDC-56	176	589	12	21	<50	<5	81	37	39	1	>10000	2	n/a	41.1	49	<0.2	<1	<10
CDC-57	176	190	110	2460	<200	<73	34	96	26	3	>10000	3	n/a	28.7	20	<0.6	<7	<33
CDC-58	176	1880	19	15	<50	<5	<5	120	<20	2	>10000	<1	n/a	48.5	<2	<0.2	<1	17
CDC-60	176	2040	1080	2390	7860	<78	<27	19	26	<1	7800	<3	n/a	29.2	23	<0.6	<7	<34
CDC-63	176	12	6	18	800	<5	40	63	<20	3	1250	<1	n/a	30.1	26	0.4	<1	<10
CDC-64	163	3	<2	4	<50	<5	72	<5	140	2	n/a	<1	n/a	0.8	20	1.5	1	<10
CDC-65	163	8	<2	38	280	<5	<5	5	89	5	95	<1	n/a	9.3	8	<0.2	16	<10
CDC-68	163	13	34	19	890	<5	73	92	45	2	>10000	1	n/a	5.6	32	<0.2	10	<10
CDC-69	163	46	25	38	<50	<5	10	50	28	3	>10000	<1	n/a	3.2	4	<0.2	3	25
CDC-70	163	27	110	190	<50	526	<5	200	<20	<1	>10000	<1	n/a	6.8	11	<0.2	4	<27
CDC-72	163	1450	150	40	<50	<5	18	34	44	1	>10000	<1	n/a	6.5	9	<0.2	<1	36
CDC-73	163	1060	24	17	<50	<5	<5	110	<20	3	>10000	<1	n/a	12.0	3	<0.2	7	<10
CDC-74	163	150	3	90	110	27	<5	27	<20	<1	4000	<1	n/a	19.0	5	<0.2	2	<10



Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CDC-76	162	32	<2	98	67	<5	<13	<5	280	2	n/a	<1	n/a	0.6	12	0.3	4	11
CDC-77	161	232	3	1120	<50	<5	<16	8	49	4	n/a	<1	n/a	21.8	5	<0.2	10	33
CDC-78	162	2080	293	4730	<490	<190	<76	62	170	<2	>10000	<7	n/a	11.0	32	<1.7	69	<67
CDC-79	163	943	66	38	140	<5	<17	55	<20	9	>10000	<1	n/a	5.0	2	<0.2	<2	25
CDC-80	163	51700	368	17	<50	<28	<16	32	25	<1	>10000	<1	n/a	4.1	7	<0.2	22	39
CDC-81	163	5600	35	23	290	40	15	63	43	6	>10000	<1	n/a	3.3	18	0.2	104	<10
CDC-82	163	2570	50	13	84	<5	<11	53	<20	<1	>10000	<1	n/a	26.4	<2	<0.2	<1	30
CDC-83	164	323	16	126	<50	58	<11	180	40	2	3800	<1	n/a	31.2	3	<0.2	59	27
CDC-84	164	310	1170	12700	<380	<140	<54	<5	<150	<1	>10000	<5	n/a	12.0	20	<1.2	40	93
CDC-85	164	42	31	158	3100	5	64	8	39	8	1100	<1	n/a	10.0	27	<0.2	2	<10
CDC-86	164	140	367	891	<50	160	<13	5	120	<1	180	<1	n/a	18.0	4	<0.2	135	<27
CDC-87	164	1040	95	373	260	15	60	<5	<87	9	790	<2	n/a	4.6	29	0.9	6	<22
CDC-88	164	43	11	16	180	<5	18	9	380	<1	>10000	<1	n/a	2.6	9	<0.2	1	12
CDC-89	164	12	3	144	<50	<5	33	<5	28	3	n/a	<1	n/a	1.7	13	<0.2	<1	<10
CDC-90	164	13	<2	232	200	<5	290	37	81	10	n/a	3	n/a	11.0	130	1.3	4	<21
CDC-91	164	91	2950	10400	<50	<33	<52	<5	<180	<2	>10000	<4	n/a	1.0	5	1.3	46	100
CDC-92	164	<35	466	2900	<290	<33	<53	<5	<180	<2	>10000	<5	n/a	12.0	5	1.1	114	61
CDC-93	209	<2	2	26	930	<5	58	<5	190	2	n/a	<1	n/a	1.8	28	<0.2	<1	<10
CDC-94	201	<2	<2	14	<50	<5	<5	<5	310	<1	n/a	<1	n/a	0.3	<2	<0.2	<1	<10
CDC-95	201	<2	8	23	380	5	130	<5	75	2	n/a	<1	n/a	1.0	49	0.7	<1	<10
CDC-96	201	<2	<2	5	430	<5	86	7	130	9	n/a	<1	n/a	3.7	32	1.3	<1	<10
CDC-97	197	12	<2	5	<50	<5	29	<5	200	2	n/a	<1	n/a	0.6	10	1.4	2	<10
CDC-98	197	<2	7	40	<50	<5	29	<5	290	3	n/a	<1	n/a	1.0	10	2.0	10	<10
CDC-99	197	6	7	36	<50	<5	<5	<5	340	<1	40	<1	n/a	0.6	<2	<0.2	133	<10
CDC-100	197	<2	<2	14	<50	<5	16	<5	210	4	n/a	<1	n/a	0.5	7	1.1	2	<10
CDC-101	200	69	62	6	140	69	41	<5	240	3	4600	<1	n/a	3.4	20	<0.2	32	<10
CDC-102	200	34	100	3	120	10	18	<5	240	<1	3550	<1	n/a	1.3	5	<0.2	8	<10
CDC-103	200	<2	<2	1	420	<5	77	<5	290	1	n/a	<1	n/a	1.2	27	0.7	<1	16
CDC-104	199	7	10	2	800	8	110	<5	85	3	n/a	<1	n/a	1.4	42	0.6	11	<10
CDC-105	198	22	<2	3	140	150	34	<5	480	1	n/a	<1	n/a	2.1	18	0.3	7	<10
CDC-106	198	7040	36	7	<50	654	42	16	280	1	1300	<1	n/a	3.1	19	0.3	12	<10
CDC-107	198	6	<2	1	420	28	120	7	120	3	n/a	<1	n/a	2.3	55	0.3	20	<10
CDC-108	198	3	<2	2	380	10	92	<5	140	2	n/a	<1	n/a	0.8	35	1.0	367	<10
CDC-109	196	200	58	15	<220	5	<5	11	88	<1	>10000	<1	n/a	4.2	<2	<0.2	7	<10
CDC-110	196	<2	<2	2	1000	<5	80	<5	170	3	n/a	<1	n/a	2.2	34	<0.2	<1	<10
CDC-111	196	<2	<2	3	630	<5	89	<5	330	7	5700	<1	n/a	3.2	36	<0.2	18	<10
CDC-112	209	<2	4	5	1300	<5	44	<5	160	3	n/a	<1	n/a	1.4	24	<0.2	<1	<10
CDC-113	196	3	<2	4	910	<5	83	6	220	3	n/a	<1	n/a	3.1	44	0.5	<1	19
CDC-114	196	63	35	30	<50	<5	<5	60	83	<1	>10000	<1	n/a	24.6	6	<0.2	4	18
CDC-115	196	140	229	28	<170	6	<5	22	61	<1	>10000	<1	n/a	6.5	<2	<0.2	3	17
CDC-117	195	387	75	210	<190	<5	<5	87	47	<1	>10000	<1	n/a	8.3	<2	<0.2	3	<10
CDC-118	195	<2	2	4	880	<5	82	9	210	2	n/a	<1	n/a	2.9	41	0.2	<1	<10



Table A-2A Analysis of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CDC-119	195	<2	<2	33	850	<5	71	8	82	2	n/a	<1	n/a	3.5	35	0.3	5	<10
CDC-122	195	14	3	39	640	<5	73	9	240	5	n/a	<1	n/a	3.4	39	<0.2	7	15
CDC-123	194	<2	<2	5	880	<5	71	<5	160	7	n/a	<1	n/a	2.2	38	<0.2	2	<10
CDC-124	194	38	65	9	<50	22	<5	25	120	<1	4100	<1	n/a	5.1	6	<0.2	<1	<10
CDC-125	194	12	19	19	<110	<5	120	30	440	1	>10000	<1	n/a	4.9	120	<0.2	18	180
CDC-126	194	752	80	88	<150	<13	<30	100	60	<1	>10000	<1	n/a	32.1	<2	0.9	105	<28
CDC-127	194	1800	292	30	<50	12	<22	140	45	<1	>10000	<1	n/a	12.0	3	<0.2	121	48
CDC-129	194	415	140	47	<50	6	<5	17	56	<1	>10000	<1	n/a	2.0	5	<0.2	<1	<10
CDC-132	193	790	150	246	<50	15	<5	64	72	<1	>10000	<1	n/a	9.1	<2	<0.2	341	<10
CDC-133	193	26	<2	4310	<140	<14	<20	7	<71	<1	1500	<1	n/a	1.9	2	0.5	9	42
CDC-134	193	180	56	347	<50	34	<12	51	68	<1	>10000	<1	n/a	12.0	<2	<0.2	22	15
CDC-138	192	100	120	22	170	<5	<10	6	42	<1	>10000	<1	n/a	1.8	9	<0.2	131	<10
CDC-139	192	1380	120	26	55	<5	25	8	50	<1	>10000	<1	n/a	2.3	29	<0.2	4	<10
CDC-140	192	77	140	36	<50	110	<5	<5	170	<1	400	<1	n/a	0.2	4	<0.2	40	<10
CDC-141	190	1170	38	26	<50	6	<5	6	<20	<1	>10000	<1	n/a	0.6	<2	<0.2	3	<10
CDC-142	190	931	309	90	<140	746	<21	<5	<74	<1	520	<2	n/a	1.5	9	<0.4	86	<37
CDC-143	190	40	8	10	<50	<5	<5	14	100	<1	6600	<1	n/a	25.7	5	<0.2	41	<10
CDC-144	190	3730	528	31	<50	8	10	14	31	<1	>10000	<1	n/a	2.3	6	<0.2	4	<10
CDC-146	190	1850	41	41	<50	47	<5	89	42	3	>10000	<1	n/a	5.9	8	<0.2	<1	<10
CDC-147	190	93	206	125	<50	11	<5	25	46	3	>10000	<1	n/a	3.6	8	<0.2	24	28
CDC-148	189	3	<2	7	560	<5	53	8	340	3	n/a	<1	n/a	3.8	25	<0.2	1	<10
CDC-149	190	746	47	62	<210	<5	65	29	24	<1	>10000	<1	n/a	12.0	32	<0.2	<2	<10
CDC-150	190	344	37	64	71	<5	<5	47	<20	<1	>10000	<1	n/a	19.0	2	<0.2	9	<10
CDC-151	195	11	<2	2	360	<5	30	6	500	1	n/a	<1	n/a	1.4	14	<0.2	6	<10
CDC-152	195	<2	<2	2	920	<5	88	7	170	3	n/a	<1	n/a	2.3	39	0.3	3	<10
CDC-154	190	6230	304	7	460	<5	41	15	110	<1	>10000	<1	n/a	8.1	23	<0.2	10	<10
CDC-155	188	14	<2	2	1000	<5	83	<5	130	1	n/a	<1	n/a	1.3	37	0.4	9	<10
CDC-156	188	<4	24	9	<50	77	90	16	40	<1	n/a	2	n/a	9.1	50	0.4	4	<10
CDC-157	185	1480	18	2	<50	9	29	<5	450	<1	1450	<1	n/a	2.6	14	<0.2	3	<10
CDC-158	185	210	5	5	<50	<5	110	6	320	<1	n/a	1	n/a	7.9	51	3.9	28	<10
CDC-159	187	11100	5	14	460	11	29	16	340	2	n/a	<1	n/a	5.0	12	<0.2	27	29
CDC-160	187	635	5	4	120	<5	6	15	390	<1	n/a	<1	n/a	5.2	5	<0.2	7	13
CDC-161	186	2040	22	2	240	35	53	<5	140	2	.06%	<1	n/a	1.6	22	0.9	8	<10
CDC-162	186	4	<2	1	98	13	49	<5	240	2	<.01%	<1	n/a	0.7	16	1.0	<1	<10
CDC-163	186	180	<2	6	200	<5	32	29	280	1	<.01%	<1	n/a	16.0	21	0.7	<1	<10
CDC-164	186	12	<2	3	850	<5	82	29	260	9	<.01%	1	n/a	5.8	34	0.5	<1	41
CDC-165	186	4430	22	5	570	<5	29	8	320	1	.14%	<1	n/a	3.5	12	<0.2	3	<10
CDC-166	184	298	<2	3	140	<5	68	<5	300	2	<.01%	<1	n/a	2.3	22	1.4	5	<10
CDC-167	184	794	2	3	100	<5	45	13	250	2	<.01%	<1	n/a	2.0	17	1.0	5	<10
CDC-168	184	12	<2	1	110	<5	91	<5	340	3	<.01%	<1	n/a	1.1	26	1.3	<1	<10

(% indicates analysis by ICP)

Table A-2A Analysis of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CDC-169	184	1160	3	6	430	<5	59	15	310	2	<.01%	<1	n/a	3.8	23	1.1	3	<10
CDC-170	184	261	<2	5	280	<5	21	21	300	1	<.01%	<1	n/a	3.3	7	0.3	1	15
CDC-171	183	216	<2	3	280	<5	110	7	290	2	.03%	<1	n/a	2.0	47	1.1	7	<10
CDC-172	174	9	6	1	<50	<5	36	<5	350	2	<.01%	<1	n/a	1.2	14	1.4	<1	<10
CDC-173	173	<25	68	>1.0%	<120	<29	<23	20	<110	1	4.81%	<1	n/a	26.5	6	1.5	57	93
CDC-174	173	1010	170	421	130	<25	<22	35	170	1	7.02%	<1	n/a	20.0	2	0.6	417	<10
CDC-175	173	20	34	63	130	6	180	<5	180	1	.42%	1	n/a	7.9	60	0.9	<1	<10
CDC-176	165	65	72	19	240	<5	44	6	60	6	.07%	<1	n/a	17.0	19	0.4	219	<10
CDC-177	165	190	2	8	450	<5	100	<5	250	2	<.01%	<1	n/a	1.1	40	0.4	1	<10
CDC-178	165	70	<2	35	540	<5	140	25	160	2	<.01%	<1	n/a	1.9	61	0.6	<1	<10
CDC-179	151	<2	<2	7	100	<5	44	<5	200	4	<.01%	<1	n/a	0.8	15	1.7	<1	<10
CDC-180	151	2	<2	8	<50	<5	51	<5	190	5	<.01%	<1	n/a	0.9	19	2.9	4	<10
CDC-181	152	686	12	837	<50	23	13	<5	74	<1	.12%	<1	n/a	47.3	4	<0.2	180	<10
CDC-182	152	13	50	8	<50	<5	<5	<5	390	1	<.01%	<1	n/a	0.5	<2	<0.2	47	<10
CDC-183	153	201	6	83	<50	<5	<5	72	<20	6	.66%	<1	n/a	1.9	4	0.6	1	<10
CDC-184	155	4	<2	209	99	<5	41	<5	140	7	.01%	<1	n/a	1.9	20	0.3	<1	<10
CDC-185	155	8	<2	14	760	<5	110	5	120	8	<.01%	<1	n/a	2.2	45	0.5	<1	<10
CDC-186	154	180	70	422	<50	25	25	220	<63	<1	9.52%	<1	n/a	3.1	18	1.2	10	34
CEM-01	653	<2	<2	19	440	<5	57	17	80	<1	n/a	<1	n/a	3.4	24	0.5	2	23
CEM-03	403	7	<2	67	210	<5	26	<5	280	4	n/a	<1	n/a	3.3	8	0.4	7	<10
CEM-04	402	1660	3	55	130	<5	18	23	200	1	>10000	<1	n/a	6.6	6	1.4	121	<10
CEM-05	402	306	4	151	230	<5	17	<5	330	<1	n/a	<1	n/a	2.6	7	0.4	10	<10
CEM-06	402	243	<2	128	<50	<5	<5	<5	340	<1	n/a	<1	n/a	1.4	<2	<0.2	4	<10
CEM-07	396	11	<2	12	130	<5	<5	<5	200	<1	n/a	<1	n/a	4.7	<2	0.5	30	<10
CEM-08	396	7310	14	112	190	<5	<21	8	190	<1	470	<1	n/a	11.0	14	1.4	20	<10
CEM-10	396	120	<2	77	<50	<5	6	<5	380	<1	n/a	<1	n/a	1.9	<2	<0.2	14	13
CEM-11	396	1060	<2	39	830	<5	100	<5	330	3	n/a	<1	n/a	3.9	40	1.0	7	<10
CEM-12	399	140	<5	2840	700	23	75	79	73	4	6100	2	n/a	7.6	37	1.1	<2	150
CEM-13	399	40	8	550	230	<5	63	<5	140	1	n/a	<1	n/a	13.0	27	0.6	29	<10
CEM-14	399	36	<2	59	560	<5	91	10	290	5	n/a	1	n/a	6.0	33	0.9	4	26
CEM-15	398	324	7	32	73	<5	<5	5	290	<1	92	<1	n/a	2.1	<2	<0.2	7	<10
CEM-16	398	26	<2	17	480	<5	84	39	200	5	9700	2	n/a	3.4	30	1.4	<1	32
CEM-17	398	336	<2	66	<50	<5	11	21	260	<1	510	<1	n/a	11.0	4	0.4	13	28
CEM-18	397	19	3	26	150	<5	14	<5	240	1	130	<1	n/a	1.6	4	0.2	6	<10
CEM-19	397	7	<2	22	680	<5	10	<5	190	2	n/a	<1	n/a	1.0	5	0.4	1	<10
CEM-20	394	48	<2	402	210	<5	<5	<5	160	<1	n/a	<1	n/a	25.1	3	<0.2	25	<10
CEM-21	395	7	<2	9	510	<5	25	<5	180	1	n/a	<1	n/a	1.6	11	0.2	<1	<10
CEM-22	394	6	<2	38	680	<5	74	<5	310	<1	n/a	<1	n/a	4.1	31	0.5	8	<10
CEM-23	394	4	<2	39	52	<5	21	<5	250	<1	n/a	<1	n/a	4.1	10	0.4	26	<10
CEM-24	393	47	4	8	<50	<5	31	<5	180	<1	17	<1	n/a	4.4	13	<0.2	18	<10

(% indicates analysis by ICP)

Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CEM-25	371	37	<2	2	580	<5	160	8	98	5	117	<1	n/a	1.9	58	0.6	6	11
CEM-26	371	13600	24	4	130	11	<16	77	25	<1	>10000	<1	n/a	12.0	6	<0.2	24	19
CEM-28	392	15	<2	41	57	<5	<5	14	300	<1	n/a	<1	n/a	4.9	3	<0.2	21	15
CJO-01	381	6	<2	22	420	<5	460	<5	240	2	n/a	<1	n/a	0.9	180	1.7	<1	<10
CJO-02	382	1180	9	25	95	<5	<5	6	400	<1	1900	<1	n/a	2.3	4	1.3	2	<10
CJO-03	388	3160	6	31	<120	78	18	7	340	<1	1000	<1	n/a	1.8	7	2.2	147	<10
CJO-04	387	4350	5	7	160	<5	11	14	490	<1	n/a	<1	n/a	1.6	5	0.2	2	<10
CJO-05	389	885	4	25	52	<5	10	5	450	<1	n/a	<1	n/a	1.4	6	0.8	16	<10
CJO-06	386	6540	13	7	<50	<5	<5	<5	450	<1	238	<1	n/a	1.3	<2	0.2	53	<10
CJO-07	390	7460	6	4	98	<5	<10	6	430	<1	58	<1	n/a	2.1	4	<0.2	11	<10
CJO-08	380	47	3	4	<50	<5	21	<5	200	1	n/a	<1	n/a	1.1	43	2.0	4	<10
CJO-09	379	20300	288	17	330	<5	<16	<5	240	2	n/a	<1	n/a	2.6	7	<0.2	15	<10
CJO-10	383	14300	160	15	<100	8	<15	<5	250	<1	2450	<1	n/a	3.8	3	1.5	384	12
CJO-11	384	1270	3	35	400	<5	32	12	310	2	n/a	<1	n/a	4.5	15	0.6	17	<10
CJO-12	385	2370	8	45	300	<5	63	23	140	12	158	<1	n/a	5.8	26	1.5	7	56
CJO-13	391	40	<2	8	<130	<5	87	120	87	<1	>10000	<1	n/a	6.5	48	2.5	18	<10
CJO-14	432	16	2	7	100	<5	140	<5	290	2	n/a	<1	n/a	1.6	50	0.9	<1	<10
CJO-15	433	72	2	5	610	<5	10	6	330	2	n/a	<1	n/a	1.4	6	0.3	183	11
CJO-16	433	5	<2	7	340	<5	110	7	310	3	n/a	<1	n/a	2.2	44	0.8	3	33
CJO-17	435	150	40	3	340	<5	<5	7	420	<1	n/a	<1	n/a	3.3	3	0.2	41	<10
CJO-18	439	35	42	88	500	<5	<23	<5	260	<1	336	<1	n/a	1.3	16	<0.4	<2	<10
CJO-19	438	41	69	70	390	<5	15	<5	230	4	600	<1	n/a	0.5	8	0.3	1	<10
CJO-20	437	10	7	1	230	<5	9	<5	420	2	5000	<1	n/a	1.2	3	0.4	49	<10
CJO-21	572	10	<2	1	160	<5	22	18	590	2	n/a	<1	n/a	5.2	8	0.2	<1	82
CJO-22	571	20900	47	6	120	<5	<15	10	370	1	3800	<1	n/a	3.7	5	<0.2	3	14
CJO-23	570	581	<2	1	180	<5	14	9	410	1	33	<1	n/a	1.9	7	<0.2	<1	17
CJO-24	569	29	2	7	750	<5	44	<5	240	2	n/a	<1	n/a	1.3	22	<0.2	<1	<10
CJO-25	431	1060	37	862	1100	<47	28	<5	<52	<1	4700	<1	n/a	2.8	11	<0.4	<4	<10
CJO-26	434	33	15	5	<50	<5	<5	6	230	<1	9800	<1	n/a	1.2	<2	<0.2	291	<10
CJO-27	434	48	19	97	240	<5	<5	11	180	<1	7900	<1	n/a	3.0	<2	<0.2	1940	<10
CJO-28	436	<2	<2	5	830	<5	51	6	150	3	n/a	<1	n/a	1.9	23	<0.2	2	<10
CJO-29	430	<2	<2	5	810	<5	63	<5	160	3	n/a	1	n/a	1.4	24	<0.2	3	18
CJO-30	428	43	<2	12	320	<5	37	8	250	2	n/a	1	630	1.7	11	<0.2	47	<10
CJO-31	429	93	50	125	2400	<5	24	<5	150	2	1930	<1	n/a	2.1	10	<0.2	8	<10
CJO-32	574	7200	19	4	480	<5	<16	380	210	<1	n/a	<1	n/a	10.0	10	<0.2	6	19
CJO-33	573	58	<2	<1	<50	<5	<5	<5	420	<1	n/a	<1	n/a	0.4	<2	<0.2	<1	<10
CJO-34	427	10	3	37	260	10	33	<5	230	2	n/a	<1	n/a	2.5	21	<0.2	6	<10
CMH-02	698	<2	<2	2	6390	<5	519	<5	64	<1	n/a	3	n/a	2.3	232	0.6	<1	<10
CMH-03	699	2	2	5	110	<5	120	<5	53	3	n/a	<1	n/a	1.0	57	0.5	3	<10
CMH-04	697	<2	<2	3	680	<5	66	<5	39	1	n/a	<1	n/a	1.3	33	<0.2	3	<10
CMH-05	695	2	3	4	360	<5	140	<5	75	2	n/a	<1	n/a	1.3	64	0.5	<1	13
CMH-06	695	4	<2	4	310	<5	140	<5	46	3	n/a	<1	n/a	1.3	63	0.5	1	<10

Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CMH-10	696	<5	4	17	860	5	68	28	140	<1	n/a	2	n/a	5.3	39	0.4	<1	61
CMH-11	696	<2	<2	7	<50	<5	<5	<5	490	<1	n/a	<1	n/a	0.4	<2	<0.2	<1	<10
CMH-12	696	<2	<2	8	1200	<5	71	17	140	1	n/a	<1	n/a	3.4	34	<0.2	1	26
CMH-13	696	<2	<2	3	1600	<5	140	33	220	<1	n/a	2	n/a	6.1	71	<0.2	<1	65
CMH-14	696	8	<2	7	800	<5	88	26	250	1	n/a	<1	n/a	4.6	39	<0.2	<1	26
CMM-01-A	111	11	14	82	720	<5	22	110	130	9	n/a	<1	n/a	27.0	21	0.5	23	<21
CMM-01-B	111	79	49	457	280	23	<11	80	<20	4	>10000	<1	n/a	41.5	8	0.5	33	<21
CMM-01-C	111	71	70	459	330	25	<12	94	28	5	>10000	<1	n/a	40.5	13	0.6	34	<24
CMM-01-D	111	248	130	230	250	15	<10	97	<20	6	>10000	<1	n/a	27.3	11	0.3	21	22
CMM-02-A	3	130	<7	1410	<110	537	<26	320	140	<1	4400	<1	n/a	8.5	7	0.7	21	110
CMM-02-B	3	309	13	6480	<890	200	37	656	77	<1	>10000	3	n/a	9.2	<41	<0.9	40	190
CMM-02-C	3	99	<8	4130	<150	18	<31	79	68	<1	5500	<1	n/a	62.0	<2	3.6	12	100
CMM-02-D	3	<62	9	9680	<6600	240	<220	859	28	<1	>10000	5	n/a	16.0	<300	<1.6	<44	330
CMM-02-E	3	180	11	5340	<720	290	48	597	80	<1	>10000	2	n/a	11.0	<35	<0.6	28	140
CMM-02-F	3	170	39	6000	<350	210	26	680	29	<1	9.33%	3	n/a	24.4	14	<0.5	56	260
CMM-03-A	70	1890	4	25	56	5	14	<5	300	1	n/a	<1	n/a	1.4	4	<0.2	<1	<10
CMM-03-B	70	21300	11	12	<50	6	<16	5	350	<1	n/a	<1	n/a	1.4	5	<0.2	4	<10
CMM-03-C	70	13	<2	13	610	<5	160	20	190	7	n/a	2	n/a	6.6	59	1.7	<1	44
CMM-03-D	70	110	<2	14	500	<5	150	19	200	5	n/a	1	n/a	4.4	58	0.9	<1	28
CMM-03-E	70	33	<2	33	470	<5	130	22	150	4	n/a	<1	n/a	5.0	52	0.8	<1	27
CMM-04-A	72	33	91	52	<120	490	<24	<5	<71	<1	235	<1	n/a	1.4	5	<0.4	6	<41
CMM-04-B	72	17	<2	65	<50	22	13	<5	<20	2	150	<1	n/a	3.3	7	0.3	<1	11
CMM-04-C	72	<9	72	59	<100	300	<17	<5	<63	<1	335	<1	n/a	1.8	5	<0.2	3	<36
CMM-04-D	72	7	<2	29	120	14	10	<5	<20	<1	132	<1	n/a	3.3	6	<0.2	<1	<10
CMM-05-C	73	10	3	9	200	13	7	<5	<20	<1	12	<1	n/a	3.3	7	<0.2	<1	<10
CMM-05-D	73	11	<4	25	350	240	12	6	<20	<1	46	<1	n/a	3.8	8	0.7	2	<23
CMM-07-A	71	6650	71	3	340	<5	61	<5	160	2	3150	<1	n/a	1.1	30	0.5	8	18
CMM-08-A	55	17	<2	45	930	<5	120	13	310	21	48	2	n/a	3.3	52	0.8	<2	35
CMM-08-B	55	6	4	34	530	<5	84	13	240	6	15	<1	n/a	6.3	38	0.9	<1	62
CMM-08-C	55	<6	<2	34	480	<5	71	31	700	49	14	<1	n/a	5.8	30	1.1	<1	120
CMM-08-D	60	<2	<2	12	550	<5	260	20	290	8	n/a	<1	n/a	6.3	100	1.3	<1	21
CMM-08-E	58	51	<2	47	640	<5	17	18	180	6	15	<1	n/a	6.1	13	0.5	3	<10
CMM-08-F	58	87	5	51	50300	<5	<18	20	200	5	17	2	n/a	6.0	9	0.6	4	<10
CMM-08-G	58	4	<2	4	5470	<5	44	7	150	13	3	<1	n/a	2.0	19	0.3	<1	<10
CMM-08-H	61	<2	9	22	660	<5	36	12	140	9	n/a	<1	n/a	4.2	16	0.6	<1	30
CMM-08-I	59	6	<2	10	420	<5	68	<5	150	9	n/a	<1	n/a	1.4	27	1.5	<1	21
CMM-08-J	59	<7	<2	35	3800	<5	28	<5	150	9	n/a	<1	n/a	2.2	12	1.2	<2	<10
CMM-08-K	59	<11	<2	30	820	<5	50	7	270	6	n/a	<1	n/a	3.2	31	1.3	10	24
CMM-08-L	59	20	<2	49	390	<5	31	13	240	5	n/a	<1	n/a	7.3	17	1.2	<1	26
CMM-08-M	59	5	<2	19	330	<5	130	10	160	5	n/a	<1	n/a	4.0	61	0.5	<1	<10
CMM-08-N	56	13	<2	31	440	<5	84	10	220	9	n/a	2	n/a	6.0	38	0.7	3	36
CMM-08-O	56	4	<2	5	660	<5	120	11	270	18	n/a	<1	n/a	2.9	49	0.7	<1	15



Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CMM-08-P	60	<2	7	18	320	<5	31	<5	300	5	n/a	<1	n/a	1.1	13	0.2	<1	<10
CMM-08-Q	61	<2	<2	3	870	<5	36	<5	210	6	n/a	<1	n/a	0.9	18	<0.2	<1	<10
CMM-08-R	63	<6	<2	32	10.7%	<5	370	7	770	6	n/a	2	1220	3.1	180	0.6	<3	<24
CMM-08-S	62	<5	<2	21	1000	<5	56	9	220	21	n/a	<1	n/a	3.5	21	0.6	<1	<10
CMM-08-T	57	16	<2	41	34900	9	16	10	190	6	7	<1	n/a	6.8	11	0.6	5	<10
CMM-08-U	57	9	<2	75	550	<5	42	34	170	4	5	<1	n/a	15.0	21	0.7	5	66
CMM-08-V	50	19	<2	39	57500	13	32	13	140	4	6	<1	n/a	5.4	12	<0.4	9	<10
CMM-08-W	55	<2	<2	<1	910	<5	60	52	110	8	n/a	2	n/a	13.0	24	0.8	<1	110
CMM-08-X	55	<11	26	42	310	<5	66	<5	<98	9	n/a	<1	n/a	5.2	42	1.5	<4	22
CMM-08-Y	56	<2	<2	14	250	<5	120	10	220	15	n/a	<1	n/a	2.2	48	0.4	<1	<10
CMM-08-ZA	56	<41	<4	<19	5920	<61	<5	16	<130	<1	n/a	<1	n/a	19.0	26	1.4	<10	28
CMM-09-A	52	36	14	78	<50	789	14	<5	59	1	152	<1	n/a	0.7	3	<0.2	12	<28
CMM-09-B	52	212	170	1100	<140	330	25	<5	110	<2	120	<1	n/a	1.4	<2	<0.4	7	110
CMM-09-C	52	492	264	777	<140	2340	<22	<5	<75	<2	880	<1	n/a	1.5	3	<0.5	49	58
CMM-09-D	53	140	<2	1090	<50	8	<14	16	27	<1	16	<1	n/a	37.2	4	1.1	128	74
CMM-10-27	33	<49000	<136	12.0%	<10000	9000	<1000	<170	<3600	<29	147	<110	5.26%	<12.7	<5000	<82.0	<7000	<1000
CMM-10-28	33	<48	6	394	<210	<75	<28	<5	<82	<1	105	<3	510	<0.2	<6	<0.7	11	<29
CMM-10-29	48	19	11	33	310	<5	554	9	330	3	59	3	360	1.7	219	<0.2	2	25
CMM-10-30	39	12	2	3	3400	<5	310	20	180	3	16	2	2220	8.4	130	<0.2	15	87
CMM-10-31	47	<2	<2	46	400	<5	15	16	120	8	9	1	370	4.9	14	<0.2	3	<10
CMM-10-32	47	<2	<2	6	390	<5	60	<5	130	8	6	<1	460	0.5	22	<0.2	<1	<10
CMM-10-33	46	<71	222	822	<300	<110	<44	<5	210	<1	4500	<4	560	<0.4	<7	<1.0	<11	<41
CMM-10-34	46	<66	1200	1940	<290	<110	<40	<5	310	<1	n/a	<4	80	<0.4	9	<0.9	<10	<40
CMM-10-35	46	3	3	5	140	<5	29	<5	<20	23	90	<1	6600	0.4	9	<0.2	1	<10
CMM-10-36	46	<2	9	36	94	<5	<5	<5	<20	28	172	<1	4.94%	0.5	4	<0.2	18	<10
CMM-10-37	46	<93	130	1090	380	<150	<57	<5	<160	<1	9500	<6	2890	<0.5	<10	<1.3	848	<54
CMM-10-38	45	6	15	93	100	75	<13	<5	69	9	570	<1	8800	1.7	3	<0.2	31	<10
CMM-10-39	34	<150	722	2110	<990	<150	<170	<25	<600	<4	>10000	<16	250	1.4	<8	<3.8	41	<140
CMM-10-40	34	<2	25	19	<50	<5	9	<5	73	<1	66	<1	280	<0.2	<2	<0.2	3	<10
CMM-10-41	33	<110	592	1980	<700	<110	<120	<18	<410	6	1.56%	<12	>10000	<1.1	<6	2.6	95	<100
CMM-10-42	33	<4	7	28	54	<5	10	<5	<20	<1	182	<1	920	0.5	5	<0.2	3	<10
CMM-10-43	36	20	<2	3	650	<5	43	7	130	12	8	<1	n/a	2.7	21	<0.2	<1	<10
CMM-10-44	36	1290	383	286	<360	<33	<68	<5	<240	<2	>10000	<6	n/a	<0.5	2	<1.3	<9	<52
CMM-10-45	34	100	<2	87	4100	<5	11	<5	120	1	20	<1	n/a	1.1	17	<0.2	18	13
CMM-10-46	36	337	3	44	450	<5	42	<5	62	8	170	<1	n/a	1.7	19	0.4	<1	<10
CMM-10-47	36	19	<2	4	1100	<5	180	<5	140	8	36	<1	n/a	1.9	76	<0.2	<1	<10
CMM-10-48	34	66	<2	35	12.0%	<19	<18	<5	130	2	49	<1	n/a	1.0	5	0.4	7	12
CMM-10-49	34	<2	<2	9	71	<5	12	<5	<20	<1	6	<1	n/a	<0.2	5	<0.2	<1	<10
CMM-10-50	36	16	2	7	1500	<5	56	6	75	4	33	<1	n/a	1.0	24	<0.2	<1	<10
CMM-10-51	36	55	<2	4	670	<5	46	<5	90	7	13	<1	n/a	1.7	19	<0.2	<1	19
CMM-10-D	48	<22	<7	82	510	<12	98	<5	<150	3	n/a	<4	n/a	5.4	48	2.0	<5	<41
CMM-10-E	48	<2	<2	1	550	<5	37	<5	120	13	n/a	<1	n/a	2	18	<0.2	<1	<10



Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CMM-10-F	54	<7	<2	369	5580	7	<15	45	130	6	n/a	<1	n/a	15.0	7	1.0	13	58
CMM-10-G	54	20	11	13	<50	<5	9	<5	<20	<1	n/a	<1	n/a	<0.2	<2	<0.2	<1	<10
CMM-10-H	47	<2	<2	73	450	<5	34	<5	88	13	n/a	<1	n/a	4.0	14	0.4	2	<10
CMM-10-I	47	<10	<2	27	510	8	<19	12	210	6	n/a	<1	n/a	6.8	9	1.2	18	<10
CMM-10-J	45	18	310	442	<50	23	<17	<5	55	10	6600	<1	3.21%	1.8	2	<0.2	142	<10
CMM-10-K	45	16	22	33	130	6	<12	<5	82	6	430	<1	5440	0.3	3	<0.2	9	<10
CMM-10-L	45	<24	52	510	<110	<40	<14	<5	73	13	1600	<1	4.0%	0.5	<2	<0.2	23	<10
CMM-10-M	45	100	71	620	550	<53	<18	6	81	13	1.53%	<1	3.68%	1.9	<2	<0.4	109	<27
CMM-10-N	45	10	27	312	<50	49	<15	<5	<20	36	740	<1	2.37%	1.0	2	<0.2	16	<10
CMM-10-O	49	<2	<2	25	870	<5	170	20	130	17	n/a	1	n/a	3.6	65	<0.2	2	39
CMM-10-P	49	<2	<2	5	220	<5	29	7	220	3	n/a	<1	n/a	1.9	12	<0.2	<1	<10
CMM-10-Q	49	61	4	13	370	<5	100	5	220	10	n/a	1	n/a	2.0	37	<0.2	<1	15
CMM-10-R	49	7	<2	5	880	<5	862	45	360	3	n/a	<1	n/a	10.0	387	1.4	<1	65
CMM-10-S	49	31	10	30	1000	<5	34	11	270	<1	n/a	<1	n/a	2.1	12	<0.2	5	<10
CMM-10-T	33	<330	140	13600	<1300	<530	<210	<25	<540	<5	>10000	<18	420	<1.7	65	<4.6	155	<170
CMM-10-U	33	<31	91	3830	<140	<50	<19	<5	69	<1	9500	<2	110	<0.2	<2	<0.4	7	<21
CMM-10-V	33	<94	338	1920	<400	<150	<59	<5	310	<1	>10000	<6	70	<0.6	<10	<1.3	<15	<56
CMM-10-W	33	<29	150	4390	<50	290	<18	<5	<50	<1	8400	<1	480	0.2	<2	<0.2	367	<21
CMM-10-X	33	<2	<2	46	210	<5	<5	<5	<20	12	n/a	<1	3.68%	<0.2	<2	<0.2	5	<10
CMM-10-Y	33	<4	<2	21	96	<5	24	<5	<20	43	210	<1	3.94%	0.3	6	<0.2	2	<10
CMM-10-Z	33	<68	455	3240	<300	<110	<43	<5	<120	<1	>10000	<4	1400	4.5	15	<1.0	33	<49
CMM-11-27	82	<160	654	4420	<990	<160	<170	<25	<580	<4	3.07%	18	n/a	<1.5	<9	<3.8	49	<140
CMM-11-28	82	<2	<2	16	230	<5	26	6	27	<1	68	<1	n/a	1.8	14	0.2	<1	<10
CMM-11-29	82	<2	<2	7	<50	<5	37	9	110	<1	25	1	n/a	3.4	16	0.3	<1	<10
CMM-11-30	92	150	7	29	79	7	<5	12	<20	2	1650	<1	n/a	16.0	<2	<0.2	<1	<10
CMM-11-31	92	<2	<2	<1	<50	<5	<5	<5	<20	<1	14	<1	n/a	0.5	<2	<0.2	<1	<10
CMM-11-32	92	<2	<2	1	1100	<5	98	<5	140	1	6	<1	n/a	1.2	44	0.6	<1	<10
CMM-11-33	92	402	11	63	72	<5	<5	13	<20	<1	9200	<1	n/a	21.5	<2	<0.2	<1	<10
CMM-11-34	89	44	<2	19	330	<5	200	11	140	2	n/a	1	n/a	3.9	88	0.5	<1	<10
CMM-11-35	78	37	9	17	340	7	19	31	75	1	>10000	<1	n/a	7.4	11	<0.2	3	<10
CMM-11-36	76	3	<2	2	1300	<5	94	<5	200	<1	44	<1	n/a	0.8	42	0.5	<1	12
CMM-11-37	77	425	170	30	3300	<5	<5	50	26	<1	>10000	<1	n/a	7.7	<2	<0.2	42	<10
CMM-11-38	79	<2	<2	5	<50	<5	6	<5	38	<1	330	<1	n/a	<0.2	3	<0.2	<1	<10
CMM-11-39	74	<2	<2	11	470	<5	19	<5	140	<1	n/a	<1	n/a	1.7	8	0.3	<1	<10
CMM-11-40	83	95	7	32	390	9	20	16	57	1	980	<1	n/a	12.0	10	0.2	<1	<10
CMM-11-41	75	71	6	26	220	<5	24	97	<20	6	>10000	<1	n/a	9.2	14	0.3	8	<10
CMM-11-42	75	26	9	16	<50	<5	<5	18	54	<1	8800	<1	n/a	14.0	5	<0.2	8	<10
CMM-11-43	75	99	7	12	<50	<5	<5	11	<20	<1	>10000	<1	n/a	2.5	<2	<0.2	<1	<10
CMM-11-44	76	<2	<2	1	130	<5	20	<5	240	<1	57	<1	n/a	0.4	8	<0.2	<1	<10
CMM-11-45	83	<2	<2	3	760	<5	45	19	53	2	68	<1	n/a	5.5	23	0.5	<1	<10
CMM-11-46	83	287	180	18	110	8	19	55	110	6	>10000	<1	n/a	12.0	12	0.2	29	<10
CMM-11-47	83	260	460	15	720	57	48	61	44	9	>10000	<1	n/a	10.0	24	0.3	21	<10

Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CMM-11-48	84	130	82	51	51	15	<5	70	39	1	>10000	<1	n/a	14.0	4	<0.2	2	<10
CMM-11-49	84	59	47	6	<50	130	30	87	41	1	>10000	<1	n/a	16.0	15	0.4	21	15
CMM-11-50	84	34	75	27	80	190	39	74	36	3	>10000	<1	n/a	15.0	16	0.7	37	<21
CMM-11-51	84	63	58	46	390	220	43	130	76	5	>10000	<1	n/a	7.5	21	0.4	7	<10
CMM-11-52	87	<2	<2	1	870	<5	77	13	79	1	264	<1	n/a	3.7	35	0.5	<1	<10
CMM-11-53	87	10	<2	1	<50	<5	6	<5	24	<1	54	<1	n/a	1.4	<2	0.3	<1	<10
CMM-11-54	88	45	28	243	94	<5	<10	<5	<20	<1	2200	<1	n/a	31.3	4	<0.2	46	<10
CMM-11-55	85	407	520	99	180	50	<5	99	190	<1	>10000	<1	n/a	10.0	<2	<0.2	7	<10
CMM-11-56	85	9	7	15	1400	76	42	230	<20	9	>10000	<1	n/a	12.0	21	0.4	1	<10
CMM-11-57	85	<2	<2	57	56	<5	<5	<5	<20	<1	110	<1	n/a	0.6	<2	<0.2	<1	<10
CMM-11-58	85	<2	<2	4	64	<5	170	16	67	3	71	2	n/a	3.7	75	0.5	<1	<10
CMM-11-59	86	190	210	1440	480	<65	<60	<5	220	<2	6900	<6	n/a	<0.6	6	<1.4	76	<51
CMM-11-60	86	3	<2	7	<50	<5	18	<5	<20	<1	45	<1	n/a	0.4	8	0.2	<1	<10
CMM-11-61	86	<2	<2	15	580	<5	54	22	42	3	59	1	n/a	4.5	26	0.4	<1	<10
CMM-11-62	88	20	<2	41	210	<5	93	16	140	1	n/a	<1	n/a	5.1	35	0.6	2	<10
CMM-11-A	91	7	<2	7	130	<5	9	<5	210	<1	n/a	<1	n/a	0.8	3	<0.2	5	<10
CMM-11-B	89	10	<2	24	760	<5	63	<5	170	3	n/a	<1	n/a	2.1	30	0.6	12	16
CMM-11-C	90	342	12	26	<50	<5	<5	21	<20	<1	n/a	<1	n/a	41.7	<2	0.6	<1	<10
CMM-11-D	90	190	92	45	<50	<5	<5	10	270	<1	n/a	<1	n/a	7.5	<2	<0.2	18	<10
CMM-11-E	89	455	22	73	2100	<5	<5	36	56	3	n/a	<1	n/a	37.0	<2	1.1	<1	<10
CMM-11-F	79	2	<2	1	<50	<5	12	<5	<20	<1	n/a	<1	n/a	0.4	5	<0.2	<1	<10
CMM-11-G	81	87	26	13	<50	22	48	20	34	<1	>10000	<1	n/a	7.9	23	0.4	<1	<10
CMM-11-H	81	5	6	5	560	5	82	<5	60	1	215	2	n/a	2.2	35	0.6	<1	<10
CMM-11-I	77	<2	<2	35	<50	<5	11	<5	<20	<1	19	<1	n/a	1.6	4	<0.2	<1	<10
CMM-11-J	77	<2	<2	1	<50	<5	<5	<5	<20	<1	20	<1	n/a	<0.2	<2	<0.2	<1	<10
CMM-11-K	77	120	22	57	660	16	37	44	<20	2	>10000	<1	n/a	3.4	18	<0.2	40	<10
CMM-11-L	77	<2	<2	3	1100	<5	99	<5	170	2	92	1	n/a	1.2	42	0.5	<1	<10
CMM-11-M	93	95	91	563	<160	190	480	<5	<93	<1	227	<1	n/a	14.0	15	<0.5	<3	<33
CMM-11-N	93	8	<2	45	980	<5	120	14	120	3	63	<1	n/a	2.0	54	0.4	<1	<10
CMM-11-O	93	130	120	381	<120	23	380	<5	100	<1	105	<1	n/a	12.0	7	<0.2	<3	<20
CMM-11-P	93	<2	<2	14	880	<5	54	<5	48	1	25	<1	n/a	1.0	21	0.3	<1	<10
CMM-11-Q	82	<2	<2	3	710	<5	56	9	93	2	46	1	n/a	4.3	27	0.4	<1	<10
CMM-11-R	82	277	9	49	<50	6	<5	240	<20	<1	1930	<1	n/a	53.4	<2	<0.2	<1	<10
CMM-11-S	82	79	130	27	<50	160	12	120	55	<1	>10000	<1	n/a	8.4	4	<0.2	2	<21
CMM-11-T	82	43	100	17	<50	200	24	41	74	1	>10000	<1	n/a	5.5	19	<0.2	2	<20
CMM-11-U	82	11	<2	10	<50	<5	18	31	91	<1	400	<1	n/a	6.9	12	0.3	<1	<10
CMM-11-V	81	<2	<2	3	160	<5	<5	<5	<20	<1	230	<1	n/a	<0.2	<2	<0.2	1	<10
CMM-11-W	81	65	60	32	970	<5	70	15	56	2	>10000	<1	n/a	6.2	32	0.4	<1	<10
CMM-12-A	44	<81	265	909	18.4%	<130	61	<5	260	<1	n/a	<4	n/a	0.5	<15	<1.6	<20	<32
CMM-12-B	44	<4	<2	3	1700	<5	150	24	310	15	n/a	<1	n/a	8.2	65	1.3	<1	37
CMM-12-C	44	<18	<2	<3	1300	20	<36	<5	290	2	n/a	<1	n/a	3.5	13	2.6	32	26
CMM-12-D	44	<4	<2	<1	460	<5	<11	66	220	4	n/a	2	n/a	12.0	6	0.6	<1	100

Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CMM-12-E	43	<4	<2	13	130	<5	43	<5	150	9	n/a	<1	n/a	1.5	17	<0.2	<1	<10
CMM-12-F	43	366	<2	41	260	<5	24	6	240	4	n/a	<1	n/a	2.5	15	0.3	2	<10
CMM-13-A	42	714	<2	6	900	<5	23	<5	400	1	n/a	<1	n/a	1.9	12	0.3	<1	<10
CMM-13-B	42	37	<2	11	1100	<5	200	8	92	9	n/a	<1	n/a	2.5	72	0.4	<1	12
CMM-13-C	42	16	<2	4	440	<5	160	<5	52	4	n/a	1	n/a	1.4	69	0.7	<1	<10
CMM-13-D	42	3	<2	5	270	<5	25	<5	130	4	n/a	<1	n/a	1.1	11	0.8	<1	<10
CMM-13-E	42	11	<2	1	360	<5	65	5	230	3	n/a	<1	n/a	1.9	21	0.4	<1	<10
CMM-14-27	27	3	<2	2	<50	<5	<5	<5	<20	<1	62	<1	n/a	<0.2	2	<0.2	1	<10
CMM-14-28	25	3	<2	3	<50	<5	<5	<5	<20	<1	19	<1	n/a	<0.2	2	<0.2	<1	<10
CMM-14-29	25	15	18	5	<50	<5	<5	<5	<20	<1	23	<1	n/a	<0.2	<2	<0.2	<1	<10
CMM-14-30	25	16	8	2	<50	<5	<5	<5	<20	<1	21	<1	n/a	<0.2	<2	<0.2	<1	<10
CMM-14-31	27	16	190	159	<110	<11	<18	<5	96	<1	830	<1	n/a	0.5	3	<0.2	18	<10
CMM-14-32	27	14	33	7	<50	<5	<5	<5	<20	<1	33	<1	n/a	<0.2	<2	<0.2	1	<10
CMM-14-33	27	3	5	2	<50	<5	<5	<5	<20	<1	13	<1	n/a	<0.2	<2	<0.2	<1	<10
CMM-14-34	27	5	<2	3	<50	<5	<5	<5	<20	<1	15	<1	n/a	<0.2	<2	<0.2	3	<10
CMM-14-35	25	13	24	22	<50	23	<5	<5	29	<1	52	<1	n/a	0.3	<2	<0.2	2	<10
CMM-14-36	25	31	86	13	<50	<5	<5	<5	27	<1	42	<1	n/a	<0.2	<2	<0.2	2	<10
CMM-14-41	30	<2	<2	15	<50	<5	9	<5	26	2	14	<1	n/a	0.7	3	<0.2	6	<10
CMM-14-42	30	<2	<2	3	<50	<5	<5	<5	<20	<1	9	<1	n/a	<0.2	<2	<0.2	1	<10
CMM-14-43	30	<29	930	610	<270	<27	<45	<5	230	<1	4100	<4	n/a	1.1	3	<0.9	178	<43
CMM-14-44	24	<2	7	72	<50	<5	10	<5	<20	<1	40	<1	n/a	0.4	3	<0.2	3	<10
CMM-14-A	19	316	1170	299	<420	<67	<66	<11	<230	<2	6800	<7	n/a	0.8	8	2.0	<11	<59
CMM-14-B	32	17	27	9	<50	<5	<5	<5	<20	<1	47	<1	n/a	0.2	<2	<0.2	<1	<10
CMM-14-C	32	190	75	568	<260	<88	<35	<5	<130	<1	670	<4	n/a	<0.4	<8	<1.0	18	<37
CMM-14-D	30	<41	325	305	<150	<51	23	<5	<69	<1	970	<3	n/a	<0.2	8	<0.5	10	<23
CMM-14-E	30	37	452	187	110	<38	27	<5	<46	<1	680	<1	n/a	0.2	14	<0.2	7	<10
CMM-14-F	32	110	<2	25	350	<5	330	19	200	4	n/a	2	n/a	5.7	140	1.0	<1	<10
CMM-14-G	32	<7	<2	463	<50	<5	<13	16	<20	<1	440	<1	290	29.4	4	0.7	28	83
CMM-14-H	32	<41	58	340	<150	<51	<18	<5	<70	<1	250	<3	n/a	0.3	10	<0.6	7	<22
CMM-14-I	32	32	234	37	<50	94	<12	<5	<47	<1	n/a	<1	n/a	0.3	<2	0.5	20	<10
CMM-14-J	32	130	354	207	<110	380	<13	<5	<48	<1	n/a	<1	n/a	0.7	8	<0.2	<4	<10
CMM-14-K	29	208	298	643	<220	<75	<27	<5	<100	<1	5700	<4	150	0.5	12	1.0	<9	<33
CMM-14-L	27	4	6	4	<50	<5	<5	<5	<20	<1	n/a	<1	n/a	0.2	2	<0.2	<1	<10
CMM-14-M	27	9	5	2	<50	<5	<5	<5	<20	<1	n/a	<1	n/a	<0.2	<2	<0.2	<1	<10
CMM-14-N	31	561	362	32	<50	<5	<12	<5	<44	<1	n/a	<1	n/a	<0.2	2	0.4	55	<10
CMM-14-O	31	<40	44	270	<140	<48	<17	<5	<65	<1	n/a	<3	n/a	<0.2	<5	<0.5	<6	<20
CMM-14-P	31	4	<2	7	<50	<5	8	<5	<20	<1	n/a	<1	n/a	0.4	3	<0.2	1	<10
CMM-14-Q	19	6	12	16	<50	<5	<5	<5	<20	<1	109	<1	n/a	<0.2	2	<0.2	2	<10
CMM-14-R	32	18	30	21	<50	<5	15	<5	<20	<1	n/a	<1	n/a	0.8	9	0.3	2	<10
CMM-14-S	27	21	30	6	<50	<5	<5	<5	<20	<1	44	<1	n/a	<0.2	<2	<0.2	<1	<10
CMM-14-T	27	5	37	28	<50	<5	19	<5	35	<1	125	<1	n/a	0.8	10	<0.2	19	<10
CMM-14-U	27	80	399	74	<200	<18	<28	<5	<120	<1	780	3	n/a	0.9	3	<0.6	<4	<30



Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CMM-14-V	26	100	1140	319	<460	<75	<76	<12	<260	<2	2700	<7	n/a	<0.7	5	<1.7	14	<66
CMM-14-W	26	<2	17	6	210	<5	26	<5	360	2	68	<1	n/a	1.6	13	0.2	<1	14
CMM-14-X	36	416	<2	11	410	<5	1200	51	280	4	n/a	5	n/a	15.0	533	2.1	<1	<24
CMM-14-Y	27	150	130	55	<130	<13	<21	<5	<79	<1	490	<2	n/a	0.3	<2	<0.4	4	<21
CMM-14-Z	27	<110	3080	284	<870	<100	<150	<23	<530	<4	7600	<13	n/a	1.5	10	<3.1	<19	<130
CMM-15-A	32	<2	<2	3	160	<5	33	<5	20	2	10	<1	230	0.7	13	<0.2	<1	<10
CMM-16-27	13	<300	1370	4560	<1900	<300	<330	<47	<1100	<8	>10000	<30	n/a	<2.7	<16	<7.2	<55	<260
CMM-16-28	13	<2	13	17	90	<5	<5	<20	9	235	<1	n/a	<0.2	<2	<0.2	<1	<10	<10
CMM-16-29	20	46	354	305	<280	<46	<46	<5	<160	<1	2300	<5	n/a	<0.4	7	<1.1	<8	<39
CMM-16-30	21	130	763	329	<390	<64	<63	<10	<220	<2	3850	<6	n/a	<0.6	9	1.6	<11	<55
CMM-16-31	21	9	9	9	<50	<5	11	<5	<20	<1	91	<1	n/a	<0.2	3	<0.2	2	<10
CMM-16-32	14	13	19	25	<50	110	<5	<5	<20	<1	600	<1	n/a	<0.2	<2	<0.2	2	<10
CMM-16-33	14	17	94	104	97	<5	49	<5	<20	<1	n/a	<1	n/a	2.8	20	0.4	15	<10
CMM-16-34	14	<2	<2	6	240	<5	68	7	89	2	n/a	<1	n/a	1.9	28	0.4	<1	<10
CMM-16-35	16	190	1220	344	<480	<79	<78	<13	<270	<2	8500	<8	n/a	<0.7	7	<1.8	<13	<70
CMM-16-39	20	<49	68	197	<310	<49	<52	<5	<180	<1	245	<5	n/a	<0.5	5	<1.2	<8	<44
CMM-16-40	15	<110	936	1160	<700	<110	<120	<18	<420	<3	8200	<12	n/a	1.3	<6	<2.7	<20	<98
CMM-16-41	18	<350	1700	5460	<2200	<350	<390	<54	<1300	10	>10000	<35	3600	<3.1	28	<8.5	<64	<300
CMM-16-41P	8	15	<2	10	510	<5	674	23	300	5	n/a	2	n/a	8.9	298	1.2	<1	<22
CMM-16-42	18	<170	543	2160	<1000	<170	<180	<27	<620	15	>10000	<17	2.76%	<1.5	<9	<4.0	65	<150
CMM-16-44	23	20	120	79	<110	<11	<18	<5	<68	<1	660	<1	n/a	0.7	6	<0.2	11	<10
CMM-16-45	19	<5	99	41	84	<5	<5	<5	250	<1	530	<1	470	0.3	<2	<0.2	2	<10
CMM-16-46	19	130	264	76	<50	280	<14	<5	<59	<1	305	<1	420	0.6	2	<0.2	<2	<10
CMM-16-49	23	<2	6	15	<50	<5	9	<5	<20	<1	62	<1	n/a	0.6	5	<0.2	2	<10
CMM-16-50	23	<2	2	6	<50	<5	12	<5	<20	<1	17	<1	n/a	0.3	5	<0.2	2	<10
CMM-16-51	23	6	<2	26	<50	<5	13	<5	<20	1	30	<1	n/a	0.6	9	<0.2	<1	<10
CMM-16-52	20	<46	1060	681	<420	<42	<75	<11	<270	<2	4000	<7	n/a	<0.6	<2	2.4	<8	120
CMM-16-A	7	27	66	28	<50	<5	<11	<5	160	<1	2000	<1	80	0.2	<2	0.3	4	<10
CMM-16-B	7	333	1360	581	<160	<58	<17	<5	260	<1	>10000	<2	120	0.3	26	<0.5	<6	<24
CMM-16-C	7	39	366	107	<50	8	<12	<5	280	<1	3300	<1	70	0.5	<2	0.4	3	<10
CMM-16-D	17	21	6	211	55	<5	<5	<5	34	<1	63	<1	610	26.7	6	0.3	83	<10
CMM-16-E	7	59	683	494	<130	<48	<15	<5	<55	<1	6350	<2	170	<0.2	13	0.6	113	<20
CMM-16-F	9	238	779	44	<50	33	<5	<5	47	<1	450	<1	140	<0.2	3	<0.2	42	<10
CMM-16-G	9	24	835	114	<110	8	<18	<5	<72	<1	3900	<1	80	<0.2	3	<0.4	10	<23
CMM-16-H	8	16	14	4	<50	<5	6	<5	<20	<1	61	<1	150	<0.2	<2	<0.2	1	<10
CMM-16-I	8	24	<2	3	470	<5	85	<5	<20	<1	9	<1	n/a	0.3	50	<0.2	<1	<10
CMM-16-J	17	<41	602	390	<150	<54	<18	<5	290	<1	480	<3	n/a	0.5	7	<0.5	10	31
CMM-16-K	28	130	314	28	<50	9	27	<5	<47	<1	>10000	<1	n/a	0.4	7	0.5	4	<10
CMM-16-L	28	946	486	229	<130	<45	<14	<5	52	<1	>10000	<1	n/a	0.8	11	<0.4	6	20
CMM-16-M	17	140	922	333	<150	767	<17	<5	<63	<1	6100	<2	1080	<0.2	16	0.8	<6	<25
CMM-16-N	17	190	525	207	<120	<42	<13	<5	230	<1	490	<1	180	0.6	14	<0.2	7	<10
CMM-16-O	17	4	13	13	<50	<5	6	<5	<20	1	66	<1	710	<0.2	<2	<0.2	2	<10



Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CMM-16-P	17	<48	110	881	<170	<59	<21	<5	<79	27	3800	<3	3.1%	0.3	<6	<0.6	<7	<26
CMM-16-Q	20	44	414	120	<230	<23	<40	<5	<140	<1	1950	<4	n/a	0.4	4	<0.8	<4	<35
CMM-16-QP	28	110	<2	34	330	<5	480	21	200	4	n/a	2	n/a	7.2	216	1.0	<1	<10
CMM-16-R	11	<9	7	190	150	<5	<14	<5	<61	20	630	<1	7100	0.3	<2	<0.2	3	<10
CMM-16-S	12	<230	614	1150	<1500	<230	<260	<38	<900	<6	>10000	<24	n/a	<2.1	<12	<5.8	<42	<210
CMM-16-T	12	<170	518	2140	<1100	<160	<190	<27	<640	<5	>10000	<18	n/a	<1.6	17	<4.1	<30	<150
CMM-16-U	12	<65	514	1540	<420	<66	<70	<11	400	<2	8400	<7	n/a	0.9	5	<1.6	13	<59
CMM-16-V	12	<16	100	95	<170	<15	<25	<5	<110	<1	1800	<2	n/a	<0.2	3	<0.5	12	<25
CMM-16-W	15	65	605	1020	<210	<34	<33	<5	<120	<1	9800	<3	n/a	<0.2	4	<0.8	<5	<32
CMM-16-X	15	<88	775	1730	<570	<90	<95	<15	<330	<2	>10000	<9	n/a	1.2	8	2.2	101	<81
CMM-16-Y	15	<83	408	1280	<520	130	<89	<14	<310	<2	7300	<9	n/a	<0.8	<5	<2.0	39	100
CMM-16-Z	16	455	1620	815	<710	<110	<120	<18	<410	<3	>10000	<11	n/a	<1.0	14	<2.7	<22	110
CMM-17-A	6	<38	130	3380	<140	<49	<17	<5	<62	16	7750	<2	5.99%	2.3	<5	<0.5	1890	<21
CMM-17-B	6	<2	12	50	60	<5	<5	<5	220	7	150	<1	4.02%	0.3	<2	<0.2	17	<10
CMM-17-C	6	<5	3	79	<50	6	<5	<5	<20	21	760	<1	4.68%	<0.2	<2	0.4	8	<10
CMM-17-D	6	<55	346	2470	<200	<70	<24	<5	<91	3	8600	<3	2.42%	<0.2	16	<0.7	75	<30
CMM-17-E	5	<2	<2	8	<50	<5	<5	<5	<20	<1	36	<1	380	<0.2	<2	<0.2	3	<10
CMM-17-F	6	<14	38	746	<50	<18	<5	<5	150	4	>10000	<1	2.58%	<0.2	3	<0.2	88	<10
CMM-17-G	4	<2	<2	3	88	<5	<5	<5	<20	17	74	<1	8.94%	<0.2	<2	<0.2	<1	<10
CMM-17-H	6	<9	36	297	<50	<5	<14	<5	<52	17	1050	<1	6.26%	0.3	<2	<0.2	35	<10
CMM-17-I	10	13	<2	24	290	<5	230	21	170	2	n/a	1	n/a	6.2	96	1.1	<1	<10
CMM-17-J	10	140	<2	37	340	<5	521	24	220	4	n/a	3	n/a	8.4	224	1.2	<1	<10
CMM-18-A	41	<2	<2	2	900	<5	76	8	180	9	n/a	<1	n/a	1.6	33	<0.2	<1	<10
CMM-18-B	40	<2	<2	13	550	<5	53	<5	130	9	n/a	<1	n/a	1.5	24	<0.2	<1	20
CMM-18-C	40	16	<2	3	790	<5	88	10	260	7	n/a	<1	n/a	3.5	41	<0.2	<1	31
CMM-18-D	40	<2	<2	2	670	<5	44	33	92	5	n/a	<1	n/a	8.2	21	0.4	<1	<10
CMM-18-E	40	<2	5	4	600	<5	72	45	46	8	n/a	2	n/a	11.0	31	0.6	<1	40
CMM-19-A	112	4	<2	8	290	<5	29	<5	32	1	n/a	<1	n/a	1.0	13	0.2	8	<10
CMM-19-B	112	<2	<2	12	150	<5	<5	<5	27	<1	n/a	<1	n/a	0.2	<2	<0.2	2	<10
CMM-19-C	112	<2	3	7	530	<5	25	<5	130	1	n/a	<1	n/a	0.7	14	<0.2	<1	<10
CMM-20-27	101	19	8	5	<50	<5	<5	<5	<20	<1	14	<1	n/a	<0.2	<2	<0.2	<1	<10
CMM-20-28	101	247	241	12100	<170	290	<35	10	<110	2	9200	<1	n/a	13.0	<2	0.7	44	60
CMM-20-29	101	3	<2	7	<50	<5	<5	<5	<20	<1	16	<1	n/a	<0.2	<2	<0.2	<1	<10
CMM-20-30	102	140	10	3950	<180	<19	<43	<5	<120	<1	1800	<1	n/a	9.0	<2	<0.7	22	<33
CMM-20-31	102	37	<6	3520	170	<16	<37	<5	38	<1	1720	<1	n/a	29.5	<2	<0.6	15	<31
CMM-20-32	102	85	120	254	170	240	<22	<5	<59	<1	3100	<1	n/a	6.5	<2	<0.2	8	39
CMM-20-33	102	1410	26	96	<50	5	<11	70	62	<1	>10000	<1	n/a	5.8	4	<0.2	<1	<10
CMM-20-34A	97	<56	150	42500	<370	624	<68	<5	250	<2	3100	<3	n/a	19.0	<2	<1.5	<11	130
CMM-20-34B	97	<10	15	2430	340	120	<38	19	<83	4	3450	<1	n/a	11.0	22	1.0	8	<29
CMM-20-35	95	3	<2	7	64	<5	13	<5	<20	1	29	<1	n/a	0.5	6	<0.2	<1	<10
CMM-20-36	99	<2	<2	4	1000	<5	68	<5	190	1	70	<1	n/a	1.1	29	0.5	<1	<10
CMM-20-37	96	5	<2	5	<50	<5	<5	<5	600	<1	145	<1	n/a	0.6	<2	<0.2	1	<10

Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CMM-20-38	96	6	3	54	540	<5	46	17	<20	3	71	<1	n/a	4.2	20	0.3	3	<10
CMM-20-40	104	<170	110	3750	<1100	<160	<190	<27	<640	<4	>10000	<17	n/a	14.0	<9	5.8	193	<150
CMM-20-41	104	48	140	114	<50	<5	<18	56	25	15	>10000	<1	n/a	24.3	<2	<0.2	24	<10
CMM-20-42	104	18	90	14	<50	6	10	8	290	<1	4500	<1	n/a	1.9	6	<0.2	49	<10
CMM-20-43	95	454	64	45900	<370	531	<69	<5	<220	<2	7000	4	n/a	20.8	<2	<1.5	36	<72
CMM-20-44	95	<2	<2	4	<50	<5	8	<5	<20	<1	13	<1	n/a	<0.2	2	<0.2	<1	<10
CMM-20-45	94	1510	89	36300	<330	170	<61	<5	<200	<2	1580	<3	n/a	15.0	<2	1.4	<10	130
CMM-20-46	94	<2	<2	3	<50	<5	<5	<5	<20	<1	11	<1	n/a	<0.2	2	<0.2	<1	<10
CMM-20-47	95	379	32	14700	<190	<19	<38	<5	150	<1	1400	<1	n/a	11.0	<2	<0.7	27	110
CMM-20-48	95	180	93	24900	<340	440	<62	<5	<210	<2	3400	<4	n/a	11.0	<2	<1.3	40	<65
CMM-20-49	95	1380	78	23700	<270	230	<50	<5	100	<1	2700	<3	n/a	20.0	<2	<1.1	10	<50
CMM-20-50	95	440	30	30900	<290	513	<52	<5	110	<2	6200	<2	n/a	28.7	<2	<1.1	29	65
CMM-20-51	101	53	<2	8	1000	<5	100	<5	130	2	15	2	n/a	1.0	41	0.7	<1	<10
CMM-20-52	99	<21	47	16000	280	150	<40	<5	260	<1	3700	3	n/a	15.0	<2	1.5	23	<50
CMM-20-53	98	674	140	23300	<260	330	<50	34	<160	<1	>10000	<2	n/a	25.6	<2	1.1	43	60
CMM-20-54	98	40	<2	14	1000	<5	92	<5	180	2	54	<1	n/a	1.2	42	0.6	<1	<10
CMM-20-55	98	854	48	420	<50	14	<5	41	310	<1	1950	<1	n/a	1.3	<2	<0.2	24	<10
CMM-20-56	98	26	14	201	<50	94	<5	<5	<20	<1	200	<1	n/a	1.0	<2	<0.2	5	<10
CMM-20-57	98	894	623	17100	<230	460	<38	110	<130	2	6.73%	<1	n/a	14.0	<2	<0.8	73	<46
CMM-20-58	98	<2	<2	3	<50	<5	<5	<5	<20	<1	17	<1	n/a	<0.2	<2	<0.2	<1	<10
CMM-20-60	104	120	499	377	<400	727	<65	<10	<230	<2	2000	<6	n/a	<0.6	5	<1.5	14	<66
CMM-20-A	105	23	37	78	540	<5	45	6	150	<1	2700	<1	n/a	6.4	23	<0.2	37	<10
CMM-20-B	105	<140	160	549	930	<140	<150	<22	720	<4	1650	<14	n/a	4.3	26	<3.3	71	<120
CMM-20-C	107	8	3	43	240	<5	420	37	400	2	n/a	2	n/a	13.0	180	1.6	<1	28
CMM-20-D	110	<12	95	65	<140	<14	<32	<5	<93	<1	500	<1	n/a	0.4	5	0.9	7	21
CMM-20-E	107	68	<2	44	450	<5	33	<5	130	5	24	<1	n/a	1.9	14	<0.2	<1	11
CMM-20-F	107	299	440	4050	<1100	<150	<190	<26	<660	<4	8100	<17	n/a	<1.5	11	4.2	77	<150
CMM-20-G	107	<16	32	74	<150	270	<24	<5	<91	<1	580	<3	n/a	0.3	5	<0.5	<4	<24
CMM-20-H	108	793	50	8150	<160	<26	<27	<5	56	<1	590	<2	n/a	18.0	3	<0.6	31	<28
CMM-20-I	109	797	31	659	<50	<5	<19	9	<20	<1	1200	<1	n/a	36.2	5	<0.2	39	<10
CMM-20-J	108	140	15	696	<50	61	<19	17	140	<1	2660	<1	n/a	26.8	16	<0.2	30	<22
CMM-20-K	108	77	120	598	830	430	<17	8	<20	<1	1700	<1	n/a	20.0	3	<0.2	30	<24
CMM-20-L	108	54	7	28	<50	6	17	6	<20	<1	1300	<1	n/a	0.9	5	<0.2	13	<10
CMM-20-M	108	2960	383	861	<140	43	<30	31	<100	<1	>10000	3	n/a	14.0	4	<0.7	208	<39
CMM-20-N	101	585	51	2910	<50	140	<17	<5	26	<1	1550	<1	n/a	10.0	4	<0.2	19	<23
CMM-20-O	106	140	130	221	<230	170	<43	<5	<150	<1	1100	4	n/a	0.9	7	1.6	9	<34
CMM-20-P	106	<2	<2	7	1100	<5	100	<5	170	<1	160	<1	n/a	1.0	45	0.5	<1	<10
CMM-20-Q	106	9	5	53	190	22	62	12	<20	7	440	<1	n/a	7.9	25	0.8	2	<10
CMM-20-R	106	<87	604	1370	<610	280	<100	<17	<360	<3	8500	<10	n/a	10.0	8	<2.2	34	<97
CMM-20-S	106	532	4	51	390	<5	31	17	64	4	>10000	<1	n/a	6.0	20	<0.2	6	<10
CMM-20-T	106	140	33	27	210	17	<16	<5	220	<1	2500	<1	n/a	4.5	19	<0.2	34	<10
CMM-20-U	106	<120	499	1290	<770	250	<130	<19	490	<3	5600	<12	n/a	<1.1	<7	<3.0	35	<110

Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CMM-20-V	103	<110	658	1150	<680	300	<120	<18	<410	<3	3560	<11	n/a	<1.0	<6	<2.7	<22	<97
CMM-20-W	103	37	12	157	350	<16	<37	16	<110	<1	700	<2	n/a	2.8	11	1.0	9	<25
CMM-20-X	103	<190	1470	1160	<1200	<190	<210	<29	<700	<5	5650	<18	n/a	<1.7	<10	<4.6	70	<160
CMM-20-Y	109	<4	<2	51	140	<5	200	130	170	1	n/a	2	n/a	5.8	90	1.5	<1	<10
CMM-20-Z	101	287	43	6680	<140	502	<26	19	77	<1	1460	<1	n/a	11.0	6	<0.5	14	<32
CMM-21-A	41	8	<2	6	460	<5	360	30	330	6	n/a	1	n/a	11.0	150	2.8	<1	<22
CMM-21-B	41	<2	<2	1	920	<5	25	<5	300	4	n/a	<1	n/a	0.8	12	0.2	<1	13
CMM-21-C	41	<2	<2	1	260	<5	10	<5	170	3	n/a	<1	n/a	1.5	4	<0.2	<1	<10
CMM-21-D	41	<2	<2	3	460	<5	27	8	170	6	n/a	<1	n/a	3.2	11	<0.2	<1	29
CMM-22-A	1	<2	<2	2	1300	<5	19	<5	230	<1	n/a	<1	n/a	0.5	8	<0.2	<1	<10
CMM-22-B	1	17	<2	54	390	<5	430	56	280	3	n/a	2	n/a	14.0	190	2.6	<1	51
CMM-23-A	68	<2	<2	6	580	<5	75	11	170	4	20	<1	n/a	2.7	31	0.5	<1	24
CMM-23-B	68	<2	<2	1	220	<5	49	46	88	4	46	2	n/a	13.0	20	0.9	<1	<10
CMM-23-C	66	99	279	246	15300	<18	<34	<5	<110	<1	2000	<3	n/a	1.3	12	0.6	<3	<28
CMM-23-D	66	<7	30	59	1600	<5	82	<5	230	2	286	<1	n/a	0.7	36	<0.2	<1	<10
CMM-23-E	66	<9	55	92	640	11	<17	14	290	2	1040	<1	n/a	2.4	3	<0.2	3	<10
CMM-23-F	64	<2	<2	1	320	<5	9	<5	140	3	10	<1	n/a	0.3	5	<0.2	<1	11
CMM-23-G	68	29	6	91	580	<11	898	31	460	6	n/a	2	n/a	18.0	395	3.8	<2	<31
CMM-23-I	66	<2	<2	5	600	<5	86	6	160	18	10	1	n/a	2.4	37	<0.2	<1	<10
CMM-23-J	66	<70	520	1040	61600	<63	<140	<16	<400	<3	4600	<10	550	0.9	41	<2.3	<13	95
CMM-23-K	66	<2	<2	13	1200	<5	190	13	180	14	36	1	880	3.3	82	0.5	<1	<10
CMM-23-L	66	94	582	331	10900	<19	<31	<5	200	<1	7000	<3	n/a	1.0	3	1.3	<3	<29
CMM-23-M	66	<9	12	65	1.33%	<10	30	14	370	4	435	<1	n/a	2.6	8	<0.2	5	<10
CMM-23-N	64	<2	<2	2	1000	6	55	6	120	5	28	1	n/a	3.3	21	<0.2	1	<10
CMM-23-O	64	241	41	677	1200	<5	<11	37	170	3	71	<1	n/a	15.0	9	<0.2	3	67
CMM-25-Ap	80	7	<2	19	210	<5	96	9	110	1	n/a	<1	n/a	3.2	39	0.6	<1	<10
CMM-25-Bp	80	<2	<2	15	130	<5	28	<5	54	1	n/a	<1	n/a	1.1	11	<0.2	1	<10
CRM-01	269	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1500	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CRM-02	269	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	375	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CRM-05	412	<2	<2	16	91	<5	<5	<5	310	<1	n/a	<1	n/a	0.4	<2	<0.2	920	<10
CRM-06	404	<2	<2	2	440	<5	24	<5	150	3	n/a	<1	n/a	0.5	11	0.3	3	<10
CRM-07	406	<2	<2	5	110	<5	<5	<5	280	<1	n/a	<1	n/a	2.5	<2	0.2	5	<10
CRM-08	405	11	4	6	180	<5	9	<5	220	<1	460	<1	n/a	2.1	2	<0.2	3	<10
CRM-10	265	<2	<2	1	550	<5	37	<5	120	13	n/a	<1	n/a	2.0	18	<0.2	<1	<10
CRM-12	255	<2	<2	2	170	<5	43	22	390	4	n/a	1	n/a	5.4	19	0.5	<1	53
CRM-13	273	<2	<2	6	460	<5	36	8	260	<1	n/a	<1	n/a	2.2	11	0.5	<1	<10
CRM-14	409	3	<2	6	250	<5	16	<5	350	<1	n/a	<1	n/a	0.8	8	<0.2	<1	<10
CRM-15	411	<2	<2	52	120	<5	15	<5	260	<1	n/a	1	n/a	1.2	8	<0.2	16	<10
CRM-16	411	5	<2	10	200	<5	10	<5	250	<1	n/a	<1	n/a	0.8	4	<0.2	23	<10
CRM-17	411	5	10	230	1000	<5	62	<5	130	<1	n/a	<1	n/a	3.1	34	<0.2	6	16

(p indicates placer sample)

Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CRM-18	410	8	<2	23	1900	<5	70	<5	300	2	n/a	<1	n/a	2.3	36	0.3	101	<10
CRM-19	412	<2	<2	9	98	<5	<5	<5	330	<1	n/a	<1	n/a	1.0	<2	<0.2	24	<10
CRM-20	407	4	<2	4	810	<5	75	<5	220	<1	n/a	<1	n/a	3.5	37	<0.2	4	<10
CRM-21	273	33	160	111	<50	<5	<5	27	210	<1	1620	<1	n/a	6.0	<2	<0.2	8	14
CRM-22	274	4	<2	9	260	<5	76	21	230	<1	n/a	<1	n/a	8.9	27	1.4	1	36
CRM-24	284	4	20	12	2100	<5	25	<5	56	2	n/a	<1	n/a	4.5	18	<0.2	6	<10
CRM-25	285	4	4	9	470	<5	26	<5	200	2	n/a	<1	n/a	1.6	10	<0.2	33	<10
CRM-26	281	<2	<2	12	460	<5	72	<5	160	1	n/a	<1	n/a	1.7	36	0.2	12	<10
CRM-27	272	8	38	120	130	<5	<5	5	390	<1	n/a	<1	n/a	2.8	<2	<0.2	5	<10
CRM-28	281	<2	<2	6	310	<5	210	<5	49	<1	n/a	<1	n/a	0.6	95	0.6	<1	<10
CRM-29	282	82	13	8	230	<5	<5	<5	200	<1	n/a	<1	n/a	1.6	3	<0.2	494	<10
CRM-30	282	1510	585	1310	<3700	<320	<770	<100	<2600	<17	n/a	<53	n/a	5.7	25	<13.0	2080	560
CRM-31	303	17	5	24	1000	<5	32	7	84	5	n/a	1	n/a	3.9	23	0.4	46	<10
CRM-32	286	4	<2	5	360	<5	38	<5	150	6	n/a	<1	n/a	2.8	18	<0.2	323	<10
CRM-33	306	3	3	3	180	<5	45	<5	<20	2	n/a	<1	n/a	0.8	15	0.7	<1	<10
CRM-35	270	<2	<2	4	<50	<5	<5	<5	340	<1	n/a	<1	n/a	1.1	<2	<0.2	217	<10
CRM-36	268	6	9	117	<50	<5	<5	<5	300	<1	3200	<1	n/a	0.9	4	<0.2	11	<10
CRM-38	417	924	<2	24	99	<5	15	<5	200	<1	35	<1	n/a	0.8	6	<0.2	2	<10
CRM-39	297	15	<2	6	690	<5	66	12	51	5	n/a	<1	n/a	1.7	28	0.2	5	28
CRM-40	267	8	<2	22	870	<5	44	<5	150	2	n/a	<1	n/a	0.4	22	<0.2	<1	<10
CRM-41	302	3	4	2	480	<5	<5	<5	240	<1	n/a	<1	n/a	6.8	6	<0.2	73	<10
CRM-42	292	11	39	10	330	56	<11	<5	130	<1	8300	<1	>10000	2.7	10	0.3	66	<10
CRM-43	294	4	<2	25	150	72	15	7	120	1	3500	<1	>10000	4.4	12	<0.2	3	<10
CRM-44	293	3	10	43	260	8	22	<5	160	1	2860	<1	1370	1.1	10	<0.2	2	<10
CRM-45	305	<2	<2	1	<50	<5	<5	<5	20	<1	n/a	<1	n/a	<0.2	3	<0.2	<1	<10
CRM-51	291	<2	9	94	330	<5	65	<5	190	1	700	<1	n/a	1.3	29	<0.2	48	22
CRM-52	290	<2	<2	15	580	<5	34	<5	140	2	>10000	<1	n/a	0.9	15	<0.2	81	<10
CRM-53	290	3	<2	53	120	<5	9	8	300	<1	n/a	<1	n/a	3.0	6	<0.2	452	<10
CRM-54	416	<2	<2	1	<50	<5	<5	<5	350	<1	n/a	<1	350	1.3	<2	<0.2	156	<10
CRM-55	290	3	<2	24	430	<5	30	<5	210	1	6500	<1	930	0.9	14	<0.2	626	<10
CRM-56	415	11	<2	3	110	<5	39	8	98	1	190	<1	n/a	9.3	28	0.4	4	<10
CRM-57	304	15	10	2	230	<5	<5	17	330	<1	3000	<1	n/a	2.5	2	<0.2	10	14
CRM-58	296	<6	28	120	190	27	40	<5	190	3	>10000	<1	>10000	1.2	29	0.2	10	<10
CRM-59	295	6	37	6	<50	9	<5	<5	200	<1	n/a	<1	n/a	2.3	2	<0.2	4	<10
CRM-60	296	3	7	11	100	<5	6	23	190	<1	n/a	<1	n/a	2.4	3	<0.2	2	<10
CRM-61	304	21	33	1	78	10	48	9	140	<1	>10000	<1	n/a	2.3	22	<0.2	5	<10
CRM-62	304	82	46	1	170	<5	8	<5	250	<1	>10000	<1	n/a	2.5	3	<0.2	<1	<10
CRM-63	271	<5	27	<1	180	9	<5	36	210	11	>10000	<1	5130	5.0	6	<0.2	14	15
CRM-64	413	6	<2	3	90	<5	<5	23	220	<1	530	<1	n/a	9.1	<2	<0.2	538	<10
CRM-65	414	9	10	3	200	31	17	63	99	<1	8500	<1	n/a	15.0	13	<0.2	2	<10
CRM-66	289	24	110	2	270	230	<5	17	120	<1	600	<1	n/a	1.7	7	<0.2	117	<10
CRM-67	287	4	<2	3	860	<5	46	<5	160	2	107	<1	n/a	0.9	23	<0.2	<1	<10



Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CRM-68	287	7	5	115	970	6	51	<5	150	3	184	<1	n/a	1.2	25	<0.2	1	<10
CRM-69	287	15	54	569	200	<5	<12	<5	230	<1	1570	<1	n/a	3.1	3	<0.2	1250	<10
CRM-70	275	<4	3	52	750	<5	32	<5	160	1	410	<1	n/a	0.7	18	<0.2	23	<10
CRM-71	276	<2	<2	6	800	<5	30	<5	170	1	42	<1	n/a	0.8	14	<0.2	4	<10
CRM-72	277	7190	413	106	110	<5	<5	<5	390	<1	450	<1	n/a	0.9	3	<0.2	15	<10
CRM-73	277	44	14	10	110	<5	14	<5	260	2	30	<1	n/a	0.6	6	<0.2	14	<10
CRM-74	278	23	<2	2	1000	<5	46	<5	120	3	n/a	<1	n/a	1.1	24	<0.2	<1	<10
CRM-75	408	11	6	4	5730	<5	38	13	150	3	36	<1	n/a	3.7	19	<0.2	158	18
CRR-01	359	3370	311	129	<50	53	<17	25	170	<1	n/a	<1	n/a	7.9	3	<0.2	11	<23
CRR-02	336	17	<2	3	1000	<5	73	<5	140	2	n/a	<1	n/a	1.4	33	0.3	<1	<10
CRR-03	337	<2	<2	3	710	<5	77	5	170	2	n/a	<1	n/a	2.4	35	0.5	<1	<10
CRR-04	338	120	28	293	<180	<5	<5	24	74	<1	>10000	<1	n/a	20.5	12	2.2	105	22
CRR-05	338	31	<2	16	<50	<5	84	27	100	<1	8900	<1	n/a	19.0	60	1.3	60	14
CRR-06	338	5	<2	11	<50	5	39	45	92	2	4600	1	n/a	16.0	33	0.9	6	<10
CRR-08	339	19	<2	32	<140	<5	55	35	62	<1	>10000	1	n/a	12.0	31	1.7	34	<10
CRR-09	339	18	<2	16	230	<5	180	617	140	2	>10000	4	n/a	4.8	83	1.8	116	200
CRR-10	339	16	4	24	340	<5	52	14	82	4	210	<1	n/a	2.6	23	0.8	16	<10
CRR-11	342	200	<2	5	980	<5	34	12	390	3	n/a	<1	n/a	2.0	15	<0.2	17	<10
CRR-12	342	9	<2	7	440	<5	54	6	430	<1	n/a	1	n/a	1.3	22	<0.2	15	<10
CRR-13	342	27	<2	4	300	<5	48	8	250	1	n/a	<1	n/a	2.0	21	<0.2	14	<10
CRR-14	342	9	<2	8	200	<5	120	10	330	1	n/a	<1	n/a	2.4	54	<0.2	12	<10
CRR-16	343	44	<4	192	<50	110	<5	310	37	<1	2300	<1	n/a	33.4	<2	<0.2	58	<10
CRR-17	343	58	<2	126	<50	<5	<5	320	71	<1	4150	<1	n/a	49.8	<2	<0.2	10	<10
CRR-18	343	376	<2	88	<50	<5	20	618	120	<1	>10000	<1	n/a	24.1	6	<0.2	35	<10
CRR-19	344	35	<2	24	740	<5	44	<5	200	3	n/a	<1	n/a	1.7	30	<0.2	11	<10
CRR-20	344	8	<2	6	1700	<5	84	<5	95	<1	n/a	<1	n/a	0.6	38	0.4	<1	<10
CRR-21	344	<2	<2	46	120	<5	<5	6	100	<1	n/a	<1	n/a	15.0	2	<0.2	1	<10
CRR-22	344	<2	2	81	1300	<5	85	<5	78	4	n/a	<1	n/a	7.4	52	<0.2	41	12
CRR-23	344	425	110	142	<50	30	<5	32	190	<1	2600	<1	n/a	19.0	<2	<0.2	174	<10
CRR-24	345	14	<2	8	860	<5	93	<5	140	5	n/a	<1	n/a	1.5	41	0.5	<1	<10
CRR-25	334	8250	8	23	280	<12	83	29	130	2	n/a	<1	n/a	12.0	48	0.7	47	<10
CRR-26	334	53	4	67	<50	42	<5	<5	<20	<1	n/a	<1	n/a	0.3	3	<0.2	25	<10
CRR-27	368	20	<2	113	280	13	20	24	67	7	n/a	<1	n/a	5.3	9	<0.2	7	<10
CRR-28	368	7810	18	28	320	<5	47	44	130	5	n/a	<1	n/a	23.1	27	1.2	110	26
CRR-29	368	1450	4	15	800	<5	50	29	290	3	1680	<1	n/a	6.2	26	0.6	10	12
CRR-30	368	8710	5	16	190	<5	70	41	240	1	>10000	<1	n/a	4.6	29	0.7	24	25
CRR-31	368	3890	4	14	1000	<5	77	150	260	4	1060	<1	n/a	6.6	35	0.6	9	19
CRR-32	370	110	30	20	<50	300	<5	23	210	<1	8800	<1	n/a	2.9	<2	<0.2	45	<10
CRR-33	370	53	52	10	150	9	9	16	20	1	1600	<1	n/a	4.2	5	<0.2	7	<10
CRR-34	369	24	<2	32	<50	<5	<5	42	<20	<1	n/a	<1	n/a	44.3	<2	<0.2	<1	<10
CRR-35	369	29	3	72	<50	<5	30	200	<20	<1	n/a	<1	n/a	43.2	35	0.3	<1	540
CRR-36	369	36	<2	136	<50	<5	<5	71	<20	<1	n/a	<1	n/a	43.2	4	<0.2	<1	190

Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CRR-37	366	150	<2	2	750	<5	8	67	140	11	n/a	<1	n/a	5.8	4	<0.2	2	39
CRR-38	367	12	<2	3	1000	<5	67	11	110	2	n/a	<1	n/a	2.2	31	0.3	<1	<10
CRR-39	367	15	2	4	1200	<5	34	39	170	5	n/a	<1	n/a	2.4	14	<0.2	30	25
CRR-40	366	314	<2	7	640	<5	38	62	210	3	n/a	<1	n/a	4.3	19	<0.2	<1	33
CRR-41	364	804	<2	211	<50	<5	<13	<5	240	<1	n/a	<1	n/a	11.0	3	<0.2	46	<10
CRR-42	362	3590	11	10	<50	31	<5	11	430	<1	1800	<1	n/a	3.1	<2	<0.2	5	<10
CRR-43	362	12000	160	11	<50	19	<22	<5	400	<1	7100	<1	n/a	3.5	<2	<0.2	<2	15
CRR-44	362	23	<2	50	800	<5	74	12	250	1	n/a	<1	n/a	8.8	39	0.4	4	<10
CRR-45	362	53	11	25	<50	22	<5	8	180	<1	n/a	<1	n/a	1.1	2	<0.2	2	<28
CRR-46	362	3020	11	130	<50	170	<5	<5	23	<1	n/a	<1	n/a	34.8	3	<0.2	<1	<10
CRR-47	362	303	<2	57	280	5	<5	21	270	2	n/a	<1	n/a	21.0	3	<0.2	11	44
CRR-48	362	8750	<5	3380	<50	<13	<24	6	<79	<1	n/a	<1	n/a	30.1	<2	<0.5	78	46
CRR-49	363	190	120	307	<180	70	<28	<5	240	<1	n/a	<3	n/a	13.0	4	0.9	38	<29
CRR-50	363	4	<2	15	<50	<5	31	<5	170	1	n/a	<1	n/a	1.0	11	<0.2	<1	<10
CRR-51	358	4	<2	3	200	<5	270	16	300	2	n/a	<1	n/a	3.2	110	0.3	<1	<10
CRR-52	358	29	<2	3	79	<5	38	<5	450	<1	n/a	<1	n/a	1.1	18	<0.2	2	<10
CRR-53	358	1790	<2	40	560	<5	41	6	310	<1	n/a	<1	n/a	2.0	19	<0.2	3	10
CRR-54	358	4	<2	8	410	<5	16	<5	360	<1	n/a	<1	n/a	0.9	7	<0.2	<1	10
CRR-55	352	89	<2	5	180	<5	13	<5	380	<1	n/a	<1	n/a	0.9	7	<0.2	<1	<10
CRR-56	346	14	<2	6	340	<5	683	6	310	1	n/a	<1	n/a	2.3	276	0.5	<1	<10
CRR-57	350	224	<2	96	620	<5	110	36	61	9	n/a	2	n/a	5.7	37	0.3	3	26
CRR-58	350	2970	<2	84	680	<5	77	42	140	3	n/a	2	n/a	5.4	27	0.3	15	29
CRR-59	350	130	<2	4	120	<5	16	<5	420	<1	n/a	<1	n/a	1.3	9	<0.2	3	<10
CRR-60	349	10	<2	19	1400	<5	240	<5	140	2	n/a	<1	n/a	4.0	110	<0.2	<1	<10
CRR-61	349	516	<2	2	<50	<5	5	<5	430	<1	n/a	<1	n/a	0.7	3	<0.2	1	<10
CRR-62	349	13	3	16	380	<5	60	<5	310	1	n/a	<1	n/a	3.5	36	0.5	6	12
CRR-63	349	991	4	74	120	<5	<5	63	270	<1	n/a	<1	n/a	10.0	3	<0.2	29	<10
CRR-64	349	84	<2	2	55	<5	7	15	250	<1	n/a	<1	n/a	1.5	4	<0.2	9	<10
CRR-65	350	3	<2	7	340	<5	<5	<5	140	2	n/a	<1	n/a	5.1	3	<0.2	<1	<10
CRR-66	353	7	<2	2	1200	<5	88	25	150	2	n/a	1	n/a	5.2	37	0.4	<1	44
CRR-67	353	11200	3	12	230	<5	18	13	410	<1	n/a	<1	n/a	2.7	8	<0.2	7	<10
CRR-68	353	256	2	86	<50	<5	9	<5	200	1	n/a	<1	n/a	13.0	7	<0.2	49	<10
CRR-69	353	9210	3	8	89	<5	<5	7	350	<1	n/a	<1	n/a	1.6	3	<0.2	8	<10
CRR-70	353	12100	4	31	120	<5	<5	5	360	<1	n/a	<1	n/a	2.3	4	<0.2	16	<10
CRR-71	358	65	<10	7	910	<23	4560	<16	680	16	n/a	<7	n/a	6.3	2150	2.8	<7	<62
CRR-72	351	18	<2	19	740	<5	44	<5	300	<1	n/a	<1	n/a	2.4	19	<0.2	<1	<10
CRR-73	351	14	<2	<1	1600	<5	350	11	210	2	n/a	2	n/a	2.7	160	0.6	<1	<10
CRR-74	351	120	<2	10	520	<5	54	<5	290	<1	n/a	<1	n/a	1.6	26	<0.2	<1	<10
CRR-75	348	522	<2	8	620	<5	110	8	340	1	n/a	2	n/a	4.1	47	0.3	<1	21
CRR-76	353	496	<2	7	300	<5	21	10	320	<1	n/a	<1	n/a	3.0	13	<0.2	17	15
CRR-77	353	1390	<2	2	380	<5	25	7	400	<1	n/a	<1	n/a	1.0	14	<0.2	2	<10
CRR-78	353	1250	<2	7	410	<5	52	<5	360	<1	n/a	<1	n/a	6.5	25	<0.2	33	12

Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CRR-79	348	6900	<2	8	180	<5	25	<5	370	<1	n/a	<1	n/a	3.1	15	<0.2	7	<10
CRR-80	348	7530	<2	3	310	<5	21	10	290	<1	n/a	<1	n/a	1.2	7	<0.2	2	<10
CRR-81	348	4270	<2	3	460	<5	19	<5	270	1	n/a	<1	n/a	0.9	14	<0.2	1	<10
CRR-82	353	45	<2	<1	210	<5	15	<5	270	<1	n/a	<1	n/a	0.7	8	<0.2	1	<10
CRR-83	357	214	<2	44	<50	<5	<5	56	250	<1	n/a	<1	n/a	12.0	4	1.1	<1	<10
CRR-84	356	1450	6	95	<50	<5	6	8	290	<1	n/a	<1	n/a	6.9	4	<0.2	13	<10
CRR-85	356	17400	6	103	180	<5	<12	32	220	<1	n/a	<1	n/a	10.0	6	<0.2	23	<10
CRR-86	356	899	<2	6	82	<5	7	11	330	<1	n/a	<1	n/a	2.2	3	<0.2	4	11
CRR-87	356	1390	2	20	120	<5	<5	14	410	<1	n/a	<1	n/a	2.8	<2	<0.2	8	<10
CRR-88	347	20	<2	5	960	<5	77	6	190	3	n/a	<1	n/a	2.2	34	0.4	5	20
CRR-89	347	<2	<2	12	<50	<5	<5	19	61	<1	n/a	2	n/a	10.0	3	<0.2	<1	<10
CRR-90	347	98	<2	9	82	<5	32	460	250	5	n/a	<1	n/a	16.0	20	<0.2	23	57
CRR-91	354	333	<2	5	140	<5	7	13	300	<1	n/a	<1	n/a	4.0	4	<0.2	48	<10
CRR-92	354	28	<2	16	320	<5	67	6	150	<1	n/a	1	n/a	7.6	22	<0.2	15	23
CRR-93	354	85	<2	2	130	<5	<5	<5	340	<1	n/a	<1	n/a	0.9	<2	<0.2	3	12
CRR-94	354	7140	<2	4	<50	<5	<5	<5	450	<1	n/a	<1	n/a	1.8	<2	<0.2	3	<10
CRR-95	360	244	<2	3	<50	<5	48	380	210	<1	>10000	1	n/a	5.5	19	2.4	1	41
CRR-96	360	1280	10	3	<50	<5	<5	59	180	<1	>10000	1	n/a	5.9	2	0.5	8	<10
CRR-97	333	268	8	4	110	<5	20	<5	310	<1	n/a	<1	n/a	2.3	11	<0.2	2	<10
CRR-98	353	5	<2	17	98	<5	18	799	350	<1	n/a	<1	n/a	4.3	13	<0.2	5	49
CRR-99	365	33	<2	19	260	<5	12	<5	250	<1	n/a	<1	n/a	14.0	9	<0.2	73	11
CRR-100	365	11000	7	16	<50	<550	<5	16	420	<1	n/a	<1	n/a	4.2	4	<0.2	11	<10
CRR-101	355	4190	<2	3	54	<5	<5	11	400	<1	n/a	<1	n/a	11.0	<2	<0.2	<1	16
CRR-102	365	1840	4	2	<50	<5	<5	<5	500	<1	n/a	<1	n/a	1.7	<2	<0.2	10	<10
CRR-103	365	130	<2	21	<50	<5	40	<5	360	<1	n/a	<1	n/a	6.6	17	<0.5	103	<10
CRR-104	365	3830	21	5	50	<5	17	<5	500	<1	n/a	<1	n/a	1.0	6	<0.2	15	<10
CRR-105	365	5360	4	2	<50	<5	<5	<5	450	<1	n/a	<1	n/a	1.2	<2	<0.2	3	<10
CRR-106	365	110	<2	4	1100	<5	58	12	98	4	n/a	1	n/a	5.0	24	0.5	<1	<10
CRR-107	365	3200	<2	12	260	<5	48	39	330	4	n/a	1	n/a	5.1	23	0.3	2	44
CRR-108	365	44	<2	4	<50	<5	7	<5	440	<1	n/a	<1	n/a	2.3	2	<0.2	9	<10
CRR-109	365	53	4	37	<50	5	<5	9	250	<1	n/a	<1	n/a	14.0	3	<0.2	8	<10
CRR-110	365	81	<2	9	390	<5	23	17	160	<1	n/a	<1	n/a	6.4	14	<0.2	23	<10
CRR-111	364	6090	<2	3	120	<5	<5	<5	580	<1	n/a	<1	n/a	1.6	4	<0.2	4	<10
CRR-112	364	674	<2	16	1200	<5	95	<5	230	3	n/a	120	n/a	6.7	41	0.3	3	<10
CRR-113	364	9540	<2	8	<50	<5	<5	<5	400	<1	n/a	<1	n/a	3.2	<2	<0.2	2	<10
CRR-114	364	1030	<2	2	190	<5	8	<5	3250	<1	n/a	<1	n/a	1.9	8	<0.2	1	<10
CRR-115	364	549	<2	6	120	<5	8	<5	360	<1	n/a	<1	n/a	0.8	4	<0.2	3	<10
CRR-116	361	13	<2	4	250	<5	13	<5	320	<1	n/a	<1	n/a	2.2	6	<21.0	3	<10
CTN-01	584	<6	<2	254	790	<5	61	<5	82	38	n/a	<1	n/a	1.0	30	0.5	2	<10
CTN-02	585	10	<2	62	54	<5	<5	<5	400	5	n/a	<1	n/a	0.4	<2	0.4	7	<10
CTN-03	583	6	<2	107	710	<5	84	<5	140	49	6	<1	n/a	1.1	40	0.4	<1	<10
CTN-04	582	10	<2	97	980	<5	75	<5	190	5	4	<1	n/a	0.8	33	0.4	14	<10

Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CTN-05	581	12	<2	103	750	<5	130	<5	120	14	10	<1	n/a	2.3	51	0.6	<1	<10
CTN-06	581	31	<2	131	290	<5	11	18	240	3	3	<1	n/a	1.8	4	0.5	3	48
CTN-07	580	6	<2	181	400	<5	110	<5	110	2	2	<1	n/a	1.0	35	1.0	<1	<10
CTN-08	580	22	<2	47	1300	<5	130	5	60	10	n/a	2	n/a	3.0	58	0.4	1	<10
CTN-09	580	<2	<2	3	3600	<5	230	<5	84	2	n/a	3	n/a	2.3	120	0.5	<1	<10
CTN-10	580	200	2	60	420	<5	35	<5	300	2	36	<1	n/a	1.2	13	0.4	7	<10
CTN-11	577	6	<2	74	3400	<5	190	<5	57	11	n/a	3	n/a	1.9	93	0.4	<1	<10
CTN-12	578	110	<2	193	1900	<5	210	<5	78	14	4	2	n/a	1.7	110	1.2	<1	<10
CTN-13	578	350	<2	74	1900	<5	200	<5	74	6	3	2	n/a	1.3	95	0.7	<1	<10
CTN-14	578	9	<2	523	91	<5	110	<5	120	3	2	<1	n/a	1.8	34	1.1	<1	<10
CTN-16	578	<4	<2	63	440	<5	120	<5	84	7	2	<1	n/a	1.0	36	1.0	<1	16
CTN-18	579	4	<2	32	60	<5	80	<5	150	2	n/a	<1	n/a	0.5	29	1.0	<1	<10
CTN-19	701	1220	65	7	470	10	51	10	280	3	n/a	1	n/a	3.9	36	<0.2	6	25
CTN-20	701	8	<2	3	120	<5	26	<5	380	<1	n/a	<1	n/a	2.6	14	0.5	<1	<10
CTN-21	701	563	4	3	200	<5	7	<5	320	<1	22	<1	n/a	1.3	3	<0.2	213	<10
CTN-22	701	7	<2	8	<50	<5	<5	<5	360	<1	1180	<1	n/a	0.5	3	<0.2	51	<10
CTN-23	576	212	<2	19	740	<5	84	<5	250	4	14	<1	n/a	0.6	37	<0.2	3	<10
CTN-24	586	3	<2	17	340	<5	100	<5	64	3	n/a	<1	n/a	1.0	39	<0.2	13	<10
CTN-25	587	<4	<2	22	<50	<5	<5	<5	440	<1	n/a	<1	n/a	0.5	<2	<0.2	8	<10
CTN-26	586	<2	<2	144	<160	<5	14	<5	110	1	n/a	<1	n/a	0.8	2	<0.2	117	11
CTN-27	424	1840	<2	3	400	<5	27	9	140	4	50	<1	n/a	3.0	18	<0.2	8	<10
CTN-28	424	15000	6	2	120	<5	<19	<5	370	<1	24	<1	n/a	2.2	4	<0.2	11	<10
CTN-29	424	1060	<2	2	210	<5	<5	<5	390	<1	9	<1	n/a	1.5	<2	<0.2	1	<10
CTN-30	424	8080	4	4	330	<5	29	<5	300	3	36	<1	n/a	5.1	22	<0.2	9	<10
CTN-31	425	76	<2	1	440	<5	61	11	190	5	11	1	n/a	2.5	41	<0.2	3	<10
CTN-32	425	355	12	1	2100	<5	57	6	180	3	1640	<1	n/a	2.6	31	<0.2	5	<10
CTN-33	600	1300	<2	2	650	<5	23	45	710	3	2540	<1	n/a	5.3	13	<0.2	<1	240
CTN-34	600	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CTN-35	600	747	3	6	840	<5	52	14	230	<1	5500	<1	n/a	1.7	22	<0.2	4	32
CTN-36	601	17	<2	2	720	<5	88	6	230	2	n/a	<1	n/a	2.6	39	<0.2	<1	<10
CTN-37	601	<2	<2	23	850	6	110	7	270	2	n/a	<1	n/a	6.5	52	<0.2	2	<10
CTN-38	601	<2	<2	9	820	<5	92	7	310	3	n/a	1	n/a	3.7	41	<0.2	2	<10
CTN-39	601	4	<2	27	<50	<5	<5	<5	410	<1	26	<1	n/a	1.5	<2	<0.2	6	<10
CTN-40	602	11300	9	10	<50	<5	<17	13	600	<1	450	<1	n/a	1.9	5	<0.2	6	<10
CTN-41	602	1680	9	3	<50	<5	<5	6	450	<1	910	<1	n/a	1.7	<2	<0.2	7	18
CTN-42	702	588	3	1	<50	<5	<5	<5	360	<1	7100	<1	n/a	0.4	<2	<0.2	2	<10
CTN-43	702	1130	14	1	330	<5	<5	<5	540	<1	>10000	<1	n/a	0.6	2	<0.2	3	<10
CTN-44	426	297	7	4	71	<5	<5	36	300	<1	100	<1	n/a	5.5	<2	<0.2	293	<10
CTN-45	426	36	<2	1	110	<5	<5	46	330	<1	247	<1	n/a	3.7	<2	<0.2	66	49
CTN-46	426	31	<2	2	<50	<5	<5	<5	300	<1	46	<1	n/a	1.0	<2	<0.2	2	11
CTN-47	426	4200	4	2	79	<5	11	<5	300	<1	n/a	<1	n/a	0.8	5	<0.2	2	<10
CTN-48	426	30	9	1	390	<5	9	11	260	<1	4600	<1	n/a	2.4	5	<0.2	2	<10



Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CTN-49	423	2	<2	1	<50	<5	5	<5	370	<1	n/a	<1	n/a	0.9	3	<0.2	2	12
CTN-50	423	150	<2	1	660	<5	89	<5	150	4	n/a	1	n/a	1.7	52	0.2	<1	<10
CTN-51	575	<2	<2	2	1500	<5	130	<5	55	2	n/a	<1	n/a	0.8	65	0.5	<1	<10
CTN-52	586	<2	<2	15	<50	<5	7	<5	110	2	n/a	<1	n/a	0.3	3	<0.2	<1	<10
CTN-53	586	<5	<2	333	1200	<5	110	<5	97	7	n/a	2	n/a	2.3	37	<0.2	151	<10
CTN-54	700	<2	<2	11	180	<5	<5	<5	280	<1	n/a	<1	n/a	2.0	2	<0.2	116	<10
CTN-55	700	8	6	20	<50	<5	<5	<5	310	<1	5500	<1	n/a	0.7	<2	<0.2	10	<10
CTN-56	701	15	<2	124	<50	<5	30	<5	370	<1	n/a	<1	n/a	2.1	8	<0.2	234	<10
CTN-57	701	3100	6	7	<50	<5	8	<5	330	<1	n/a	<1	n/a	2.1	6	<0.2	65	<10
CTP-001	149	<2	<2	4	88	<5	25	12	46	<1	46	<1	n/a	4.1	10	0.4	2	<10
CTP-002	149	50	29	5	1200	<5	67	42	94	2	>10000	<1	n/a	4.2	27	1.1	5	<10
CTP-003	149	41	60	9	120	5	25	31	74	<1	>10000	<1	n/a	8.9	14	0.4	78	<10
CTP-004	167	3210	277	121	<50	130	<13	10	200	<1	265	<1	n/a	5.3	2	<0.2	45	<10
CTP-005	165	1760	582	82	<130	19	<23	<5	<110	<1	650	<2	n/a	0.9	3	0.6	14	<27
CTP-006	165	110	3	115	<50	<5	<11	<5	42	<1	29	<1	n/a	1.3	<2	<0.2	3	18
CTP-009	144	25	<7	66	<50	682	<11	56	20	2	>10000	<1	n/a	20.0	7	0.5	<1	<34
CTP-010	144	130	67	204	<50	45	<5	100	72	<1	5600	<1	n/a	22.4	8	0.5	4	<10
CTP-011	144	13	3	11	360	16	71	27	120	10	500	<1	n/a	6.9	31	0.4	<1	<10
CTP-012	145	17	<2	9	2000	<5	75	11	43	8	215	<1	n/a	4.7	36	0.6	<1	<10
CTP-013	146	276	35	682	<110	22	<12	13	<20	<1	3600	<1	n/a	42.7	4	1.3	30	29
CTP-014	146	5	<2	19	<50	6	7	<5	<0	<1	n/a	<1	n/a	0.3	3	<0.2	<1	<10
CTP-015	146	3	<2	3	<50	<5	5	<5	<20	<1	n/a	<1	n/a	0.2	3	<0.2	<1	<10
CTP-016	150	6	<2	18	760	<5	150	<5	200	3	30	<1	670	2.5	67	0.8	<1	<10
CTP-019	160	10	<2	1	490	<5	84	<5	260	2	8	<1	410	1.6	33	0.5	1	<10
CTP-020	159	5	3	11	<50	<5	<5	22	56	<1	13	<1	n/a	27.1	<2	<0.2	<1	<10
CTP-021	159	2	<2	9	<50	<5	<5	23	52	<1	22	<1	n/a	13.0	<2	<0.2	<1	<10
CTP-022	169	8	<2	31	280	<5	58	47	99	9	310	2	n/a	10.0	18	0.9	<1	32
CTP-023	169	33	5	10	520	<5	180	<5	230	2	4600	2	n/a	2.5	52	1.2	<1	<10
CTP-024	169	<2	3	4	210	<5	78	8	190	1	420	<1	n/a	2.4	26	0.8	<1	22
CTP-025	167	37	5	6	<50	<5	55	11	100	2	1900	<1	n/a	10.0	28	0.6	<1	<10
CTP-030	172	5	<2	8	<50	<5	<5	<5	<20	<1	24	<1	n/a	0.3	5	<0.2	<1	<10
CTP-031	121	352	12	25	1000	<5	43	6	330	3	63	<1	n/a	2.0	22	0.5	32	<10
CTP-032	122	2670	27	25	1100	<5	64	8	200	6	68	<1	n/a	2.0	33	0.5	6	17
CTP-033	121	1110	7	13	590	<5	28	<5	250	3	29	<1	n/a	1.1	14	0.3	9	<10
CTP-034	117	8	<2	1	540	<5	150	<5	280	2	6	1	n/a	1.9	57	0.9	<1	<10
CTP-035	117	36	<2	2	350	<5	14	16	31	15	9	<1	n/a	6.7	4	1.4	<1	<10
CTP-036	117	<2	<2	7	320	<5	42	28	32	19	8	2	n/a	7.1	14	4.2	<1	40
CTP-037	150	4	<2	27	750	<5	140	6	200	2	11	<1	n/a	2.0	61	0.7	<1	18
CTP-038	171	15	<2	1040	<50	<5	<13	<5	180	<1	42	<1	n/a	5.9	5	0.6	16	15
CTP-046	210	34	1070	145	400	<51	<14	<5	120	<1	630	<1	n/a	1.4	26	<0.4	<5	<23
CTP-047	210	<8	284	40	110	<5	<19	<5	270	<1	270	<1	n/a	0.8	8	0.4	3	<10
CTP-048a	378	6	<2	7	500	<5	220	12	430	1	n/a	<1	n/a	10.0	72	1.0	<1	25

Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CTP-048b	378	<2	<2	2	860	<5	27	<5	160	1	n/a	<1	n/a	0.8	9	<0.2	<1	<10
CTP-049	377	8	6	1	310	<5	13	<5	230	<1	148	<1	n/a	1.3	6	0.3	35	<10
CTP-050	377	38	10	2	400	<5	22	<5	250	2	390	<1	n/a	1.4	10	0.3	17	<10
CTP-051	377	3	5	4	720	<5	37	<5	240	2	285	<1	n/a	1.2	17	0.2	2	<10
CTP-052	374	92	3	119	130	<5	120	31	54	4	128	2	n/a	8.0	51	<0.2	32	<10
CTP-053	374	1860	61	691	140	12	<19	30	81	<1	650	2	n/a	26.0	16	<0.2	311	37
CTP-054	374	1750	8	129	<100	<5	19	74	130	<1	470	<1	n/a	21.9	11	<0.2	308	36
CTP-055	137	9	<2	270	<50	<5	40	<5	<20	<1	14	<1	n/a	1.5	16	<0.2	3	<10
CTP-056	137	<7	<2	372	<50	<5	120	<5	150	4	10	2	n/a	2.4	48	0.5	<1	31
CTP-057	137	8	<2	56	<50	<5	16	<5	<20	<1	10	<1	n/a	0.7	5	<0.2	<1	<10
CTP-058	373	7	<2	16	810	5	99	<5	77	2	17	<1	n/a	4.3	44	0.7	4	<10
CTP-059	373	180	7	3	<50	<5	12	<5	270	<1	100	<1	n/a	2.8	7	<0.2	14	<10
CTP-060	373	27	<2	2	300	<5	41	<5	210	2	140	<1	n/a	3.3	20	0.4	6	<10
CTP-061	373	35	<2	9	220	<5	55	<5	140	3	154	<1	n/a	3.4	28	0.5	5	<10
CTP-062	160	<2	<2	118	<50	<5	<5	<5	24	<1	11	<1	n/a	1.0	3	<0.2	<1	<10
CTP-063	143	756	<2	105	120	11	99	120	96	4	>10000	2	n/a	9.1	49	<0.2	37	<10
CTP-064	143	10	<2	39	<50	<5	5	<5	<20	<1	210	<1	n/a	<0.2	4	<0.2	<1	<10
CTP-065	143	365	42	4360	<140	18	<21	<5	37	<1	1600	<1	n/a	38.2	5	<0.4	18	<28
CTP-066	143	140	9	1910	<50	<5	<18	<5	<20	3	1670	1	n/a	43.7	19	0.4	5	<21
CTP-067	178	9230	11	43	220	13	57	<5	320	2	450	<1	n/a	2.3	29	<0.2	3	<10
CTP-068	178	7440	10	21	470	17	58	5	210	4	340	<1	n/a	3.6	28	<0.2	10	<10
CTP-069	178	6	<2	5	110	<5	81	22	89	8	12	1	n/a	5.4	33	0.4	<1	<10
CTP-070	137	<2	<2	9	<50	<5	<5	<5	<20	<1	23	<1	n/a	0.3	<2	<0.2	<1	<10
CTP-071	134	24	8	2	<50	<5	<5	19	380	<1	600	<1	n/a	1.6	2	<0.2	215	<10
CTP-072	134	<2	<2	1	900	<5	95	8	200	2	240	<1	n/a	3.0	44	0.6	268	<10
CTP-073	134	5	3	12	530	<5	120	<5	190	2	480	<1	n/a	2.5	57	1.0	71	<10
CTP-074	134	8	<2	9	200	<5	33	7	280	1	330	<1	n/a	1.5	17	0.3	37	<10
CTP-075	376	<2	<2	1	440	<5	77	41	190	<1	n/a	2	n/a	7.6	34	0.4	1	100
CTP-076	376	<2	<2	2	520	<5	83	42	180	1	n/a	1	n/a	8.2	36	0.4	3	96
CTP-077	160	3	<2	2	430	<5	26	6	220	2	n/a	<1	n/a	1.4	10	0.3	<1	12
CTP-078	160	7	<2	63	770	<5	25	<5	120	1	n/a	<1	n/a	0.9	12	<0.2	<1	<10
CTP-079	160	3	<2	5	300	<5	16	<5	42	1	n/a	<1	n/a	0.7	8	0.3	<1	<10
CTP-080	160	<2	<2	2	<50	<5	7	<5	<20	<1	n/a	<1	n/a	<0.2	4	<0.2	<10	<10
CTP-081	160	<2	<2	2	84	<5	7	<5	<20	<1	n/a	<1	n/a	0.3	4	<0.2	<1	<10
CTP-082	133	<2	<2	5	1400	<5	70	11	190	2	n/a	<1	n/a	2.4	31	0.4	<1	19
CTP-083	133	<2	<2	4	1100	<5	56	6	130	2	n/a	<1	n/a	2.2	27	0.3	<1	<10
CTP-084	133	3	<2	2	130	<5	14	<5	<20	<1	n/a	<1	n/a	0.5	8	<0.2	<1	<10
CTP-085	133	<2	<2	2	960	<5	69	10	170	2	n/a	<1	n/a	1.7	29	0.3	<1	<10
CTP-086	133	<2	<2	2	890	<5	66	<5	160	2	n/a	<1	n/a	1.9	30	0.3	<1	<10
CTP-087	142	8	<2	41	830	<5	67	13	81	6	26	<1	n/a	3.3	28	0.5	<1	18
CTP-088	142	<2	<2	6	<50	<5	<5	<5	25	<1	12	<1	n/a	<0.2	7	<0.2	<1	<10
CTP-089	142	14	<2	3	<50	<5	<5	<5	<20	<1	13	<1	n/a	<0.2	5	<0.2	<1	<10

Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CTP-090	142	5	<2	<1	<50	<5	<5	<5	<20	<1	15	<1	n/a	<0.2	7	<0.2	<1	<10
CTP-091	139	12	<2	413	530	<5	37	15	<20	8	19	<1	n/a	6.4	22	0.3	<1	<10
CTP-092	139	<2	<2	11	<50	<5	7	<5	<20	<1	11	<1	n/a	0.3	3	<0.2	<1	<10
CTP-093	138	11	<2	4	<50	<5	<5	<5	<20	<1	11	<1	n/a	<0.2	<2	<0.2	<1	<10
CTP-094	138	11	<2	5	<50	<5	<5	<5	<20	<1	10	<1	n/a	<0.2	<2	<0.2	<1	<10
CTP-095	138	63	<2	229	<50	<5	<5	<5	25	<1	40	<1	n/a	39.3	<2	<0.2	77	44
CTP-096	140	<2	<2	54	59	<5	10	<5	<20	<1	13	<1	n/a	0.5	5	<0.2	<1	<10
CTP-097	140	<2	<2	79	<50	<5	10	<5	<20	<1	12	<1	n/a	0.4	7	<0.2	<1	12
CTP-098	141	<6	<2	375	<50	<5	<12	<5	<20	<1	14	<1	n/a	1.3	6	<0.2	<1	<10
CTP-099	133	<2	<2	6	900	<5	71	7	170	2	n/a	1	n/a	2.0	34	0.5	<1	<10
CTP-100	133	<2	<2	4	840	<5	80	<5	140	2	n/a	<1	n/a	1.9	36	0.5	<1	<10
CTP-101	133	3	<2	5	950	<5	83	9	130	2	n/a	<1	n/a	2.6	35	0.3	<1	24
CTP-102	133	<2	<2	4	870	<5	82	9	140	3	n/a	<1	n/a	2.7	39	0.3	<10	18
CTP-103	133	3	3	4	940	<5	74	6	160	2	n/a	<1	n/a	2.6	34	0.4	<1	12
CTP-104	133	3	<2	5	930	<5	7900	9	180	2	n/a	<1	n/a	2.6	37	0.3	<1	<10
CTP-105	133	11	<2	4	1000	<5	84	8	140	2	n/a	1	n/a	3.0	40	0.4	<1	<10
CTP-106	133	7	<2	4	990	<5	84	8	170	2	n/a	160	n/a	2.9	39	0.4	<1	<10
CTP-107	131	<2	<2	2	480	<5	79	41	210	<1	n/a	2	n/a	7.6	38	0.5	1	110
CTP-108	131	<2	<2	2	420	<5	74	39	160	<1	n/a	2	n/a	7.3	35	0.4	1	150
CTP-109	372	20	<2	4	52	<5	110	<5	220	<1	n/a	<1	n/a	0.4	44	0.9	<1	<10
CTP-110	372	<2	<2	7	220	<5	150	<5	280	<1	n/a	2	n/a	2.9	62	1.3	<1	<10
CTP-111	372	11	<2	3	59	<5	89	<5	170	<1	n/a	<1	n/a	1.3	47	0.4	<1	<10
CTP-112	372	14	<2	1	<50	<5	48	<5	350	<1	n/a	<1	n/a	1.0	19	0.4	1	<10
CTP-113	373	14	<2	3	390	<5	98	<5	290	2	n/a	<1	n/a	1.3	43	0.6	<1	<10
CTP-114	122	<2	<2	2	900	<5	74	8	190	3	n/a	<1	n/a	2.1	39	<0.2	<1	17
CTP-115	122	<2	3	5	960	<5	79	8	240	4	n/a	<1	n/a	2.5	40	0.3	<1	<10
CTP-116	122	<2	<2	7	350	<5	57	5	140	5	n/a	<1	n/a	1.5	34	<0.2	<1	<10
CTP-117	122	<2	<2	5	320	<5	30	<5	150	3	n/a	<1	n/a	0.9	20	<0.2	<1	<10
CTP-118	124	<2	<2	2	530	<5	62	7	170	2	n/a	<1	n/a	1.6	34	<0.2	<1	<10
CTP-119	124	<2	<2	2	79	<5	5	<5	440	<1	n/a	<1	n/a	0.6	2	<0.2	<1	<10
CTP-120	124	693	86	4	370	<5	57	51	280	3	n/a	<1	n/a	5.6	25	<0.2	21	<10
CTP-121	121	2010	12	11	130	<5	32	<5	170	2	n/a	<1	n/a	1.2	18	<0.2	<1	11
CTP-122	121	263	8	7	170	<5	9	<5	170	<1	n/a	<1	n/a	0.3	3	<0.2	1	<10
CTP-123	120	160	70	13	<50	<5	25	5	270	2	3100	2	n/a	5.5	13	<0.2	1	<10
CTP-124a	375	10	3	5	230	<5	600	38	410	<1	n/a	5	n/a	17.0	273	2.8	<1	100
CTP-124b	375	<2	<2	1	740	<5	41	6	190	1	n/a	<1	n/a	1.6	19	<0.2	1	16
CWC-01	312	150	<2	132	960	<5	69	<5	220	138	n/a	<1	n/a	3.6	30	0.3	4	22
CWC-02	312	10	<2	10	350	<5	15	<5	250	4	n/a	<1	n/a	1.2	6	<0.2	<1	13
CWC-03	313	5	<2	6	180	<5	55	<5	100	6	n/a	<1	n/a	0.6	20	0.7	<1	13
CWC-04	308	<2	<2	3	1100	<5	64	<5	170	2	n/a	<1	n/a	1.1	27	0.2	<1	24
CWC-09	317	<5	<2	16	88	<5	<5	<5	260	7	n/a	<1	n/a	0.3	3	<0.2	7	<10
CWC-10	316	95	<2	68	370	<5	16	<5	290	5	n/a	<1	n/a	0.6	6	0.2	133	<10

Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CWC-11	316	6	<2	13	130	<5	50	<5	150	19	n/a	<1	n/a	0.6	20	0.6	<1	<10
CWC-12	314	<2	<2	12	100	<5	75	<5	51	3	n/a	<1	n/a	0.7	31	0.7	<1	<10
CWC-14	422	<2	<2	8	<50	<5	<5	<5	220	<1	n/a	<1	n/a	0.4	<2	<0.2	<1	<10
CWC-15	263	<2	<2	<1	170	<5	72	50	70	<1	n/a	2	n/a	10.0	23	0.9	<1	<21
CWC-16	230	<2	3	2	56	<5	59	5	34	<1	n/a	2	n/a	10.0	28	0.6	<1	<10
CWC-17	230	<2	<2	247	130	<5	240	<5	190	3	n/a	1	n/a	1.7	110	0.6	<1	<10
CWC-19	252	<7	<2	137	150	<5	24	21	3990	7	120	1	n/a	0.9	12	0.6	<1	42
CWC-20	239	<2	<2	3	530	<5	57	7	330	<1	n/a	<1	n/a	1.9	24	0.4	<1	<10
CWC-22	256	8	3	2	1700	<5	51	9	140	<1	n/a	<1	n/a	3.3	20	0.9	<1	<10
CWC-23	256	5	12	3	<50	13	33	24	140	<1	>10000	1	n/a	3.3	14	0.7	<1	<10
CWC-24	257	17	130	268	<50	110	<5	13	200	<1	>10000	<1	n/a	4.8	3	1.2	39	20
CWC-25	237	24300	25	1390	<50	250	<20	22	340	<1	n/a	<1	n/a	3.2	4	<0.4	4	<21
CWC-26	237	5870	15	416	56	9	37	8	310	<1	n/a	<1	n/a	2.2	14	0.6	12	17
CWC-27	238	1130	6	72	900	18	22	14	300	1	n/a	<1	n/a	3.9	15	0.6	5	15
CWC-28	236	822	<2	25	82	<5	<5	<5	390	<1	n/a	<1	n/a	1.8	5	0.3	<1	22
CWC-29	235	3700	<2	974	100	7	<5	20	200	2	n/a	1	n/a	5.8	3	<0.2	4	28
CWC-30	235	130	<2	70	<50	<5	<5	11	290	1	n/a	<1	n/a	3.1	4	0.2	<1	18
CWC-31	280	57	<2	22	1400	<5	120	<5	100	1	n/a	<1	n/a	0.8	68	0.2	5	<10
CWC-32	279	28	7	4	310	12	7	10	310	<1	n/a	<1	n/a	2.2	3	<0.2	115	13
CWC-33	253	12	<2	44	97	<5	20	8	130	1	n/a	<1	n/a	5.3	12	0.3	2	<10
CWC-34	254	8	<2	47	20500	<5	14	15	2090	6	n/a	<1	n/a	0.5	8	<0.2	<1	55
CWC-35	251	208	25	172	590	<5	230	15	290	<1	n/a	<1	n/a	3.7	110	<0.2	7	13
CWC-36	254	4	<2	19	<50	<5	<5	35	240	<1	n/a	<1	n/a	2.6	<2	0.4	<1	22
CWC-37	245	<2	<2	58	790	<5	88	8	110	3	n/a	1	n/a	3.2	37	0.3	4	<10
CWC-38	250	7630	5	433	1700	19	120	14	180	3	n/a	1	n/a	5.1	58	<0.2	6	29
CWC-39	249	15400	14	861	100	37	17	39	170	<1	n/a	<1	n/a	14.0	15	0.3	7	21
CWC-40	248	8370	14	1460	670	15	<14	<5	290	<1	n/a	1	n/a	14.0	10	<0.2	345	<10
CWC-41	246	12100	23	4090	<110	19	<26	<5	140	1	n/a	1	n/a	12.0	10	0.5	12	<29
CWC-42	244	82	<2	33	<50	<5	14	9	280	<1	n/a	<1	n/a	2.5	7	<0.2	2	<10
CWC-43	243	2260	30	269	360	140	32	10	170	<1	n/a	<1	n/a	4.1	14	0.3	88	<10
CWC-44	242	625	28	58	130	15	35	13	290	<1	n/a	1	n/a	3.7	18	<0.2	105	<10
CWC-45	241	13	<2	10	65	<5	18	92	290	2	n/a	<1	n/a	6.1	11	<0.2	3	<10
CWC-46	240	7160	234	209	<100	150	<5	37	180	<1	>10000	<1	n/a	3.7	6	<0.2	486	<10
CWC-47	228	36	4	5	750	<5	230	<5	210	1	n/a	<1	n/a	1.6	100	0.5	<1	<10
CWC-48	228	7	<2	1	320	<5	33	<5	240	<1	n/a	<1	n/a	0.5	15	0.3	1	<10
CWC-50	320	70	<2	67	1500	<5	110	<5	94	25	n/a	<1	n/a	2.2	58	<0.2	2	<10
CWC-51	219	12400	6	26	370	<5	62	<5	250	2	n/a	<1	n/a	3.7	28	0.3	9	11
CWC-52	218	892	<2	4	120	<5	31	<5	26	<1	4350	<1	>10000	0.4	13	<0.2	<1	<10
CWC-53	218	60	<2	4	870	<5	180	<5	160	1	n/a	<1	n/a	1.1	79	0.4	<1	<10
CWC-54	221	15700	8	186	260	<5	21	8	280	1	n/a	<1	n/a	5.7	13	0.3	15	<10
CWC-55	221	388	14	9	200	<5	<5	<5	390	<1	n/a	<1	n/a	1.8	<2	<0.2	5	<10
CWC-56	225	17200	14	46	<50	31	19	<5	200	<1	n/a	<1	n/a	5.8	7	<0.2	6	21



Table A-2A Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(All analyses in ppm except Au(ppb) and Fe(%) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Au	Ag	As	Ba	Cd	Ce	Co	Cr	Cs	Cu	Eu	F	Fe	La	Lu	Mo	Ni
CWC-57	222	120	<2	8	200	7	28	<5	210	1	n/a	<1	n/a	1.2	12	<0.2	1	<10
CWC-58	225	16500	6	94	<140	10	49	10	230	<1	n/a	<1	n/a	10.0	23	<0.2	23	<10
CWC-59	225	8460	34	35	<50	220	<5	<5	140	<1	n/a	<1	n/a	5.2	2	<0.2	56	33
CWC-60	226	1110	<2	4	53	<5	21	<5	290	<1	n/a	<1	n/a	0.7	9	<0.2	3	<10
CWC-61	227	83	<2	26	960	<5	15	6	280	<1	n/a	<1	n/a	1.2	8	<0.2	<1	<10
CWC-62	224	680	4	7	250	<5	<5	<5	230	<1	n/a	<1	n/a	1.7	2	<0.2	<1	<10
CWC-63	225	22	<2	3	<50	<5	9	<5	290	<1	n/a	<1	n/a	0.4	4	<0.2	<1	<10
CWC-64	212	637	<2	25	120	<5	57	<5	38	<1	n/a	<1	>10000	1.0	25	0.3	21	<10
CWC-65	214	96	<2	2	300	<5	40	<5	54	<1	n/a	<1	>10000	0.3	18	0.2	<1	<10
CWC-66	329	678	<2	21	77	<5	34	<5	200	3	n/a	<1	n/a	0.5	16	0.4	2	<10
CWC-67	329	180	<2	46	140	<5	42	<5	110	2	n/a	<1	n/a	0.5	18	0.4	5	<10
CWC-68	329	81	<2	32	290	<5	51	<5	140	2	n/a	<1	n/a	0.4	20	0.4	2	<10



Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CAL-01	595	n/a	n/a	47	3.4	<5	1.2	0.8	<100	<0.5	<0.5	<22	<0.6	3.3	2870	<2	300
CAL-02	595	n/a	n/a	15	3.0	<5	4.0	<0.5	<100	0.6	<0.5	<10	0.7	12.0	15500	<2	<100
CAL-03	595	n/a	n/a	140	2.4	<5	1.9	4.0	<100	0.9	<0.5	<10	10.0	2.5	349	<2	120
CAL-04	588	n/a	n/a	67	0.2	<5	6.2	3.5	<100	<0.5	<0.5	<10	1.0	0.7	11	<2	100
CAL-05	588	n/a	n/a	110	0.9	<5	4.8	2.4	<100	0.5	<0.5	<10	3.4	0.8	23	<2	120
CAL-06	590	n/a	n/a	<5	0.6	<5	0.2	0.2	<100	<0.5	<0.5	<10	1.1	3.0	6	<2	<100
CAL-07	590	n/a	n/a	9	0.3	<5	<0.2	<0.1	<100	<0.5	<0.5	<10	3.1	5.1	8	<2	<100
CAL-08	591	n/a	n/a	40	0.5	<5	2.1	0.8	<100	<0.5	<0.5	20	1.2	0.6	9	<2	<100
CAL-09	589	2200	n/a	13	0.2	<5	0.5	0.3	<100	<0.5	<0.5	70	<0.2	0.8	8	<2	<100
CAL-10	599	200	n/a	28	139.0	<5	0.6	0.9	<100	1.1	<0.5	<23	1.3	2.6	4	<2	530
CAL-11	599	460	n/a	27	0.6	<5	0.3	0.4	<100	<0.5	<0.5	<10	0.6	3.4	1070	<2	2500
CAL-12	599	n/a	n/a	61	0.8	<5	0.3	0.5	<100	<0.5	<0.5	<10	1.0	2.7	4	<2	320
CAL-13	598	n/a	n/a	21	<0.1	<5	4.2	0.4	<100	<0.5	<0.5	<10	0.4	2.1	25900	<2	120
CAL-14	598	n/a	n/a	29	3.1	<5	<0.2	0.3	<100	<0.5	<0.5	<10	0.8	7.0	99	<2	530
CAL-15	597	n/a	n/a	10	0.8	<5	<0.2	0.2	<100	<0.5	<0.5	17	0.5	4.4	813	<2	880
CAL-16	593	86	n/a	110	0.2	17	5.2	7.7	<100	0.6	0.5	<10	45.3	3.8	12	<2	470
CAL-17	593	5	n/a	110	0.1	<5	17.0	9.3	<100	1.1	1.6	<10	18.0	5.3	<1	9	350
CAL-18	593	11	n/a	110	<0.1	<5	20.0	5.7	<100	0.8	1.2	<10	18.0	1.6	2	12	210
CAL-19	593	n/a	n/a	52	0.3	<5	6.8	3.5	<100	<0.5	2.6	<10	4.0	1.4	2	18	200
CAL-20	594	n/a	n/a	65	0.7	<5	0.8	0.9	<100	<0.5	<0.5	<10	1.7	0.5	7	<2	<100
CAL-21	594	n/a	n/a	24	0.5	<5	1.8	1.2	<100	<0.5	<0.5	<10	1.0	6.4	41	<2	760
CAL-22	594	720	n/a	16	926.0	<5	<0.2	0.5	<240	<0.5	<0.5	<34	0.5	<1.9	1570	<5	<350
CAL-23	594	580	n/a	31	480.0	<5	0.4	0.6	<300	<0.5	<0.5	<44	1.1	1.0	66	<11	180
CAL-24	594	400	n/a	21	36.9	<5	0.3	0.3	<100	<0.5	<0.5	<10	0.6	0.8	12	<2	390
CAL-25	594	n/a	n/a	89	35.6	<5	0.6	0.7	<100	<0.5	<0.5	<10	1.6	1.2	142	<2	<100
CAL-26	593	n/a	n/a	150	2.9	<5	1.4	7.0	<100	2.9	1.0	<10	17.0	4.5	4	3	<100
CAL-27	592	n/a	n/a	95	1.5	<5	15.0	16.9	<100	9.1	1.6	<10	115.0	10.0	5	3	<100
CAL-28	594	n/a	n/a	130	133.0	<17	0.9	1.6	<490	<0.5	<0.5	<47	<1.2	<0.7	5190	<2	180
CAL-29	594	n/a	n/a	180	3090.0	<70	<1.3	3.0	<2200	<2.0	<1.4	<250	<4.9	<4.7	12000	<61	390
CAL-30	588	n/a	n/a	24	19.8	<5	0.9	0.5	<100	<0.5	<0.5	<26	0.4	0.4	59	<2	<100
CAL-31	588	n/a	n/a	77	6.9	<5	7.0	3.5	<100	0.5	<0.5	<10	2.1	0.6	22	<2	<100
CAL-32	594	n/a	n/a	65	886.0	<21	<0.5	1.0	<740	<0.5	<0.5	<73	<1.5	13.0	24	<17	1500
CAL-33	594	n/a	n/a	110	258.0	<11	1.0	0.6	<350	0.6	<0.5	<35	2.2	25.6	48	<7	1400
CAL-34	594	n/a	n/a	60	30.1	<5	0.5	0.3	<100	<0.5	<0.5	<10	1.2	1.1	167	<2	<100
CAL-35	594	n/a	n/a	55	17.9	<5	0.4	0.3	<100	<0.5	<0.5	<10	0.5	0.4	18	<2	<100
CAL-36	594	n/a	n/a	<150	7160.0	<160	<2.8	3.0	<4900	<4.4	<2.8	<560	<11.0	<11.0	<54	<150	580
CAL-37	594	n/a	n/a	8	49.8	<5	<0.2	0.2	<100	<0.5	<0.5	<10	<0.2	0.5	18	<2	800
CAL-38	594	n/a	n/a	<14	294.0	<12	<0.2	0.1	<420	<0.5	<0.5	<42	1.7	4.5	118	<2	6400
CAL-39	594	n/a	n/a	95	66.3	<5	0.5	0.8	<100	<0.5	<0.5	<10	2.7	1.6	6	2	<100
CAL-40	594	n/a	n/a	96	32.4	<5	2.8	1.8	<100	<0.5	<0.5	<10	3.4	1.1	7	<2	<100
CAL-41	594	n/a	n/a	280	23.6	<5	2.1	3.5	<100	0.9	<0.5	<10	7.9	3.0	22	<2	400

Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CAL-42	594	n/a	n/a	230	164.0	<5	1.7	1.9	<100	0.6	<0.5	<21	6.3	2.1	17	<2	<100
CAL-43	594	n/a	n/a	41	442.0	<23	0.8	0.4	<680	<0.5	<0.5	<66	<1.6	5.8	5150	<12	130
CAL-44	594	n/a	n/a	30	62.8	<5	0.2	0.3	<100	<0.5	<0.5	<10	0.7	1.6	30	2	<100
CAL-45	594	n/a	n/a	9	3.7	<5	0.2	<0.1	<100	<0.5	<0.5	<10	0.2	1.2	13	<2	150
CAL-46	594	n/a	n/a	80	63.2	<5	0.5	0.5	<100	<0.5	<0.5	<20	1.5	6.4	6	<2	240
CAL-47	594	n/a	n/a	170	1.0	<5	1.5	1.3	<100	0.6	<0.5	<10	3.6	1.3	452	<2	<100
CAL-48	594	n/a	n/a	120	0.9	<5	0.6	0.7	<100	<0.5	<0.5	<10	1.8	1.5	308	<2	<100
CAL-49	594	n/a	n/a	30	0.8	<5	<0.2	0.3	<100	<0.5	<0.5	<10	0.4	0.9	11	<2	<100
CAL-50	594	n/a	n/a	130	4.7	<5	1.0	1.0	<100	<0.5	<0.5	<10	2.8	10.0	163	<2	160
CAL-51	596	n/a	n/a	59	1.2	<5	0.6	0.6	<100	<0.5	<0.5	<10	1.6	1.4	4	<2	<100
CAL-52	596	n/a	n/a	16	4.8	<5	<0.2	0.1	<100	<0.5	<0.5	<10	0.3	1.5	5	<2	<100
CAL-53	596	n/a	n/a	300	2.2	<5	2.3	3.1	<100	1.2	<0.5	<10	8.4	3.7	13	<2	240
CAL-55	596	8000	n/a	25	837.0	<23	<0.4	0.3	<730	<0.5	<0.5	<73	<1.5	5.1	10	<20	460
CAL-56	596	n/a	n/a	360	21.6	<5	2.8	2.9	<100	1.0	<0.5	<10	8.9	6.3	15	<2	280
CAL-57	596	n/a	n/a	22	245.0	<5	<0.2	0.2	<310	<0.5	<0.5	<32	<0.8	2.4	3	<2	<100
CAL-58	594	n/a	n/a	34	604.0	<21	<0.6	0.3	<640	1.2	<0.5	<65	<1.4	22.1	16	13	2000
CAL-59	594	n/a	n/a	29	4.5	<5	<0.2	0.2	<100	<0.5	<0.5	<10	0.5	4.7	13	<2	<100
CAL-60	596	n/a	n/a	95	1.6	<5	1.4	1.7	<100	0.6	<0.5	<10	3.9	1.1	7	<2	160
CAL-61	596	n/a	n/a	80	0.9	<5	0.9	1.4	<100	0.5	<0.5	<10	3.7	1.5	3	<2	<100
CAL-62	594	n/a	n/a	140	1.7	<5	2.4	4.0	<100	1.0	<0.5	<10	7.4	2.1	11	<2	150
CAL-63	594	n/a	n/a	170	0.8	<5	1.7	3.1	<100	0.9	<0.5	<10	7.6	4.7	8	<2	740
CAL-64	596	n/a	n/a	29	90.6	<5	<0.2	0.3	<100	<0.5	<0.5	<10	0.6	3.8	6	3	380
CAL-65	596	450	n/a	32	620.0	<16	<0.2	0.2	<520	<0.5	<0.5	<54	<1.1	6.9	5	<14	<100
CAL-66	596	n/a	n/a	130	4.5	<5	0.8	1.5	<100	<0.5	<0.5	<10	3.6	1.5	9	<2	<100
CAL-67	596	n/a	n/a	200	0.8	<5	1.5	2.7	<100	0.9	<0.5	<10	6.0	2.2	9	<2	190
CAL-68	596	n/a	n/a	59	1.4	<5	0.9	1.4	<100	0.5	<0.5	<10	3.6	1.3	13	<2	<100
CAL-69	596	n/a	n/a	38	2.6	<5	0.8	1.5	<100	0.8	<0.5	<10	3.6	0.9	14	<2	<100
CAL-70	592	n/a	n/a	210	0.4	<5	7.9	9.5	<100	1.1	1.0	<10	21.0	2.7	2	2	350
CAL-71	592	n/a	n/a	220	0.5	<5	11.0	11.7	<100	1.0	1.2	<10	29.8	3.0	2	<2	290
CAL-72	592	n/a	n/a	100	0.4	<5	3.8	2.7	<100	<0.5	<0.5	<10	2.6	1.1	1	<2	<100
CAL-73	592	n/a	n/a	34	0.4	<5	10.0	3.5	<100	0.6	0.6	<10	1.5	1.1	<1	<2	110
CAL-74	592	n/a	n/a	27	0.3	6	9.3	5.3	<100	0.8	0.8	<10	2.9	2.9	<1	3	200
CAL-75	592	n/a	n/a	120	0.3	<5	13.0	10.3	<100	0.6	1.0	<10	16.0	1.8	4	2	<100
CAL-76	592	n/a	n/a	43	1.4	<5	2.3	1.8	<100	1.4	<0.5	<10	13.0	1.9	2	<2	<100
CAL-77	592	n/a	n/a	91	0.2	<5	5.4	4.9	<100	<0.5	<0.5	<10	9.0	1.1	4	<2	<100
CAL-78	592	n/a	n/a	66	2.9	<5	3.1	12.2	<100	3.9	2.6	<10	104.0	13.0	6	5	<100
CAL-79	592	n/a	n/a	<5	3.8	<5	0.4	1.0	<100	<0.5	<0.5	<10	3.2	0.8	2	<2	<100
CAL-80	592	n/a	n/a	50	0.2	<5	3.1	4.1	<100	<0.5	0.5	<10	4.0	0.9	<1	<2	<100
CAL-81	596	n/a	n/a	21	48.3	<5	<0.2	0.3	<100	<0.5	<0.5	<10	0.7	4.0	17	<2	320
CAL-82	596	n/a	n/a	93	14.0	<5	0.7	1.1	<100	<0.5	<0.5	<10	2.7	1.6	31	<2	310
CAL-83	596	n/a	n/a	22	2.3	<5	<0.2	0.4	<100	<0.5	<0.5	<10	0.8	0.8	2	<2	<100



Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CAL-84	596	n/a	n/a	110	362.0	<13	3.2	3.0	<430	<0.5	<0.5	<45	3.8	6.7	518	<8	2700
CAL-85	596	n/a	n/a	53	209.0	<5	1.3	1.5	<280	<0.5	<0.5	<29	2.2	1.9	550	<2	1100
CAL-86	594	n/a	n/a	110	4.3	<5	0.6	1.1	<100	<0.5	<0.5	<10	3.1	1.0	11	<2	<100
CAL-87	594	n/a	n/a	13	0.9	<5	<0.2	0.2	<100	<0.5	<0.5	<10	<0.2	1.1	<1	<2	670
CAL-88	596	n/a	n/a	13	203.0	<5	<0.2	0.7	<260	0.6	<0.5	<27	2.2	1.0	4	<4	170
CAL-89	596	n/a	n/a	46	4.1	<5	0.3	0.3	<100	<0.5	<0.5	<10	0.8	0.9	2	<2	<100
CAL-90	594	n/a	n/a	140	1.7	<5	1.4	1.6	<100	<0.5	<0.5	<10	4.2	1.2	15	<2	140
CAL-91	596	n/a	n/a	46	178.0	<5	<0.2	0.3	<260	<0.5	<0.5	<26	1.5	23.4	12	<6	690
CAL-92	596	n/a	n/a	13	39.1	<5	0.7	0.2	<100	<0.5	<0.5	<10	<0.4	1.9	599	<2	110
CAL-93	592	n/a	n/a	150	0.5	<5	3.9	4.9	<100	0.6	<0.5	<10	35.5	3.5	4	<2	<100
CAL-94	592	n/a	n/a	200	1.1	<5	3.1	3.9	<100	0.6	<0.5	<10	32.2	4.5	3	<2	<100
CAL-95	592	n/a	n/a	21	2.3	<5	1.0	1.2	<100	<0.5	<0.5	<10	1.4	1.5	1	<2	<100
CAL-96	592	n/a	n/a	220	1.0	<5	12.0	8.0	<100	1.4	1.0	<10	7.4	19.0	3	3	<100
CAL-97	592	n/a	n/a	230	0.2	<5	0.7	1.2	<100	<0.5	<0.5	<10	2.2	0.9	<1	<2	<100
CAL-98	592	n/a	n/a	220	0.2	<5	8.1	10.0	<100	0.8	1.1	<10	26.1	2.9	<1	3	<100
CAL-99	592	n/a	n/a	150	0.3	<5	8.6	9.3	<100	0.8	1.5	<10	28.3	2.7	<1	3	<100
CAL-100	592	n/a	n/a	79	0.3	<5	17.0	11.9	<100	1.0	1.3	<10	15.0	1.4	<1	2	<100
CDC-001	211	n/a	n/a	290	2.8	<5	4.6	3.3	<100	1.0	<0.5	<10	33.7	22.0	16	<2	5700
CDC-002	211	n/a	n/a	49	8.5	<5	0.8	1.0	<100	<0.5	<0.5	<10	4.9	13.0	4	<2	1800
CDC-003	211	n/a	n/a	250	0.4	<5	3.2	6.1	<100	1.2	0.8	<10	33.8	4.3	9	2	4000
CDC-004	207	n/a	n/a	200	0.3	<5	2.0	5.3	<100	<0.5	0.7	<10	20.9	8.4	5	<2	2100
CDC-005	207	n/a	n/a	210	0.6	<5	4.5	6.0	<100	1.4	1.0	<10	26.6	27.3	3	2	<100
CDC-006	208	n/a	n/a	270	0.2	<5	3.7	10.0	<100	2.3	1.4	<10	49.8	5.4	<1	3	<100
CDC-007	208	n/a	n/a	280	<0.1	<5	1.2	3.2	<100	2.5	0.7	<10	41.2	5.1	<1	2	<100
CDC-008	206	n/a	n/a	250	0.1	<5	2.9	5.7	<100	0.8	0.7	<10	23.8	3.3	7	<2	290
CDC-009	206	n/a	n/a	310	1.2	<5	5.1	8.3	<100	1.6	1.0	<10	33.4	7.1	12	4	1200
CDC-010	205	n/a	n/a	79	0.2	<5	2.0	3.4	<100	0.7	<0.5	<10	14.0	2.4	1	<2	100
CDC-011	204	n/a	n/a	110	25.4	<5	5.2	4.4	<100	<0.5	<0.5	<10	3.6	5.2	13	2	480
CDC-012	204	n/a	n/a	200	0.4	<5	11.0	10.2	<100	1.1	1.5	<10	13.0	2.0	3	4	140
CDC-013	203	n/a	n/a	300	9.0	<5	25.2	6.6	<100	0.6	1.0	<10	1.9	4.5	15	3	230
CDC-014	203	n/a	n/a	270	0.6	<5	4.1	7.1	<100	1.6	0.9	<10	36.1	7.8	2	3	490
CDC-015	203	n/a	n/a	250	1.9	<5	3.9	7.0	<100	1.3	1.1	<10	31.6	4.1	2	4	150
CDC-016	203	n/a	n/a	190	16.4	<5	5.5	7.5	<100	0.6	1.0	<10	18.0	24.5	4	2	<100
CDC-017	203	n/a	n/a	230	1.9	<5	4.1	9.1	<100	1.2	1.2	<10	32.3	3.8	4	2	120
CDC-018	178	n/a	n/a	210	0.2	<5	1.7	4.9	<100	1.2	0.9	<10	30.1	3.5	<1	<2	110
CDC-019	178	n/a	n/a	170	0.2	<5	2.0	7.4	<100	1.6	0.8	<10	31.7	3.4	2	2	<100
CDC-020	178	n/a	n/a	270	0.2	<5	4.4	6.8	<100	1.3	0.9	<10	32.0	4.1	3	<2	<100
CDC-021	178	n/a	n/a	270	0.6	<5	7.8	7.8	<100	1.2	1.1	<10	22.0	8.2	4	3	<100
CDC-022	202	n/a	n/a	29	157.0	<5	0.3	1.0	<230	<0.5	<0.5	<31	1.3	2.3	<1	<2	270
CDC-023	202	n/a	n/a	220	4.3	<5	4.6	8.0	<100	<0.5	0.6	<10	20.8	15.0	9	<2	280
CDC-024	202	n/a	n/a	230	0.5	<5	4.4	8.9	<100	<0.5	0.8	<10	23.3	2.4	9	<2	470

Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CDC-025	202	n/a	n/a	230	4.9	<5	4.9	8.1	<100	0.7	0.8	<10	20.0	2.8	8	<2	1500
CDC-026	202	n/a	n/a	170	0.9	<5	2.9	5.4	<100	<0.5	0.6	<10	12.0	2.5	4	<2	130
CDC-027	178	n/a	n/a	200	0.9	<5	4.5	8.0	<100	0.9	0.8	<10	35.6	3.9	1	2	180
CDC-028	181	n/a	n/a	220	0.3	<5	3.1	5.8	<100	1.0	1.0	<10	19.0	4.6	<1	2	<100
CDC-029	180	n/a	n/a	290	0.2	<5	3.7	9.0	<100	1.0	0.9	<10	25.8	5.1	4	3	<100
CDC-030	180	n/a	n/a	250	0.4	<5	4.8	10.3	<100	1.5	1.2	<10	44.0	11.0	2	3	<100
CDC-031	178	n/a	n/a	300	0.4	<5	1.3	5.3	<100	2.8	1.1	<10	73.6	6.7	<1	4	<200
CDC-032	180	n/a	n/a	180	0.8	<5	4.1	8.3	<100	1.6	1.1	<10	45.8	3.6	<1	2	<100
CDC-033	182	n/a	n/a	130	0.6	<5	3.5	4.5	<100	0.8	<0.5	<10	38.6	11.0	7	<2	110
CDC-034	182	390	n/a	58	0.4	<5	3.4	2.2	<100	<0.5	0.8	<10	1.2	33.1	3	2	<100
CDC-035	182	1050	n/a	11	1.9	<5	2.7	2.3	<100	<0.5	0.9	<10	3.0	7.8	<1	2	26800
CDC-036	182	>10000	n/a	39	25.8	<12	<0.7	<1.0	<250	<0.5	<0.5	<32	<1.0	42.8	5	<2	16.6%
CDC-037	179	n/a	n/a	180	0.6	<5	5.8	10.4	<100	1.8	1.2	<10	48.6	6.4	1	<2	740
CDC-038	179	n/a	n/a	290	1.2	<5	11.0	7.4	<100	1.3	1.0	<10	22.9	11.0	13	<2	390
CDC-039	179	>10000	n/a	220	1.3	<5	2.6	6.6	<100	1.2	0.7	<10	30.7	9.2	3	2	960
CDC-040	177	n/a	n/a	13	52.6	<5	1.8	<1.3	<100	<0.5	<0.5	<10	0.5	62.0	49	6	900
CDC-041	177	n/a	n/a	<28	1640.0	<22	3.7	2.7	<580	0.9	<0.5	<85	4.3	19.0	1010	<13	400
CDC-042	177	56	n/a	<5	4.0	<5	0.8	0.3	<100	<0.5	<0.5	<10	0.4	0.2	229	<2	42700
CDC-043	177	n/a	n/a	11	20.9	<5	3.1	3.8	300	<0.5	0.8	<10	2.5	11.0	21	6	240
CDC-044	177	>10000	n/a	33	157.0	<5	0.8	<1.7	<260	<0.5	<0.5	<30	1.3	59.0	68	<7	10300
CDC-045	177	n/a	n/a	250	8.2	<5	13.0	9.4	<100	1.7	1.1	<10	21.8	4.3	3	3	190
CDC-046	177	9600	n/a	140	2330.0	<28	4.9	5.8	<1100	<1.2	<0.5	<130	12.0	<4.5	<180	<14	530
CDC-047	148	n/a	n/a	120	32.2	<5	27.7	8.4	<100	0.7	1.1	<10	23.9	1.0	<1	7	140
CDC-048	148	n/a	n/a	130	13.1	<5	17.0	9.1	<100	0.5	1.2	<10	7.6	1.3	<1	3	110
CDC-049	158	>10000	n/a	<5	26.5	<5	2.6	16.2	<100	<0.5	2.0	<10	<0.2	6.4	2	7	33900
CDC-050	158	2400	n/a	16	13.1	<5	3.2	7.7	<100	<0.5	0.8	<10	3.6	5.1	<1	3	12500
CDC-051	156	n/a	n/a	110	<23.0	<56	88.7	6360.0	<2000	<0.5	117.0	<460	26300.0	1590.0	<5000	<150	<2300
CDC-052	156	n/a	n/a	290	6.6	<5	1.6	15.3	<100	<0.5	1.3	<10	127.0	6.2	<1	<2	<100
CDC-053	157	>10000	n/a	100	34.3	<5	1.4	2.0	<100	<0.5	<0.5	<10	17.0	4.5	3	<2	210
CDC-054	157	60	n/a	210	4.0	<5	3.9	4.0	<100	0.7	<0.5	<10	14.0	2.4	6	<2	<100
CDC-055	157	>10000	n/a	150	532.0	<5	1.6	2.1	<360	<0.5	<0.5	<43	6.6	1.8	<50	<5	200
CDC-056	176	44	n/a	11	3.3	<5	8.5	7.9	220	0.6	1.4	<10	4.9	22.1	5	5	2100
CDC-057	176	200	n/a	<38	860.0	16	3.8	2.8	900	<0.5	<0.5	<57	2.6	59.3	293	<7	3900
CDC-058	176	4	n/a	13	3.0	<5	1.2	0.2	760	<0.5	<0.5	<10	0.7	3.2	8	<2	640
CDC-060	176	1350	n/a	<39	742.0	<12	<0.2	0.8	<470	<0.5	<0.5	<55	<0.9	4.6	<180	<6	920
CDC-063	176	22	n/a	220	4.6	<5	6.8	4.2	310	0.5	0.6	<10	6.4	1.4	33	3	790
CDC-064	163	n/a	n/a	575	1.4	<5	4.3	10.0	<100	4.5	2.2	<10	48.0	5.1	2	10	<100
CDC-065	163	n/a	n/a	50	7.7	<5	0.9	0.9	360	<0.5	<0.5	<10	1.8	11.0	72	3	340
CDC-068	163	49	n/a	150	4.5	<5	14.0	4.4	<100	<0.5	<0.5	<10	3.9	14.0	6	<2	830
CDC-069	163	30	n/a	110	1.6	<5	5.6	<0.6	<100	<0.5	<0.5	<10	3.3	15.0	17	<2	370
CDC-070	163	162	n/a	<5	3.1	<5	7.5	1.3	<100	<0.5	<0.5	<21	6.2	21.4	4	<2	13.0%

Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CDC-072	163	76	n/a	<5	3.0	<5	3.9	1.7	<100	0.6	<0.5	<10	3.5	7.3	11	<2	430
CDC-073	163	9	n/a	37	1.6	<5	2.0	<0.3	<100	<0.5	<0.5	<10	1.0	9.1	6	<2	950
CDC-074	163	3	n/a	11	1.7	<5	3.1	<0.4	<100	<0.5	<0.5	<10	2.5	9.4	27	<2	2800
CDC-076	162	n/a	n/a	23	112.0	<5	0.8	1.0	<100	<0.5	<0.5	<10	1.2	1.6	7	4	190
CDC-077	161	n/a	n/a	21	86.3	11	1.8	0.6	<100	<0.5	<0.5	<23	0.9	1.9	28	3	1800
CDC-078	162	175	n/a	<81	3520.0	53	4.4	4.8	<1300	<1.3	<0.5	<150	3.3	7.7	<190	<18	5100
CDC-079	163	25	n/a	350	116.0	<5	3.0	<0.9	<200	<0.5	<0.5	<30	4.0	32.0	20	<2	1500
CDC-080	163	63	n/a	<13	40.4	8	0.3	0.5	<100	<0.5	<0.5	45	<0.2	<1.2	<61	<2	370
CDC-081	163	36	n/a	250	52.7	<5	4.1	1.1	<100	<0.5	<0.5	<10	3.1	3.2	13	<2	8000
CDC-082	163	39	n/a	120	26.1	<5	1.6	<0.1	<100	<0.5	<0.5	31	1.5	3.0	3	<2	720
CDC-083	164	26	n/a	23	8.8	10	1.8	<0.4	<100	<0.5	<0.5	<10	0.5	13.0	38	<2	10300
CDC-084	164	>10000	n/a	<64	1650.0	87	<0.7	<0.5	<940	<1.0	<0.5	<110	<1.8	5.4	<230	<12	22100
CDC-085	164	n/a	n/a	507	9.4	<5	18.0	3.2	<100	<0.5	<0.5	<10	5.8	3.1	37	<2	220
CDC-086	164	>10000	n/a	<12	79.2	130	<0.4	<0.1	<240	<0.5	<0.5	<35	0.7	3.5	37	<2	59500
CDC-087	164	>10000	<5	210	396.0	<12	12.0	3.7	<400	<0.5	<0.5	<42	11.0	3.3	6	<8	9100
CDC-088	164	1450	n/a	37	4.7	7	4.2	1.6	<100	<0.5	<0.5	<10	4.3	0.9	<1	<2	250
CDC-089	164	n/a	n/a	37	27.7	<5	5.7	2.2	<100	<0.5	<0.5	<10	4.8	1.4	11	2	150
CDC-090	164	n/a	n/a	220	2.0	<5	33.3	19.6	<100	3.5	2.7	<10	49.2	10.0	6	7	250
CDC-091	164	>10000	<5	<32	1230.0	33	<0.8	<0.2	<950	<0.5	<0.5	<100	<2.6	7.4	38	<39	30900
CDC-092	164	>10000	n/a	<32	1500.0	<33	<0.7	<0.6	<1000	<0.5	<0.5	<110	<2.2	25.2	33	<25	24700
CDC-093	209	n/a	<5	150	5.0	<5	4.1	4.1	<100	0.8	<0.5	<10	10.0	1.8	4	<2	100
CDC-094	201	n/a	n/a	<5	2.2	<5	<0.2	0.2	<100	<0.5	<0.5	<10	0.4	<0.2	<1	<2	<100
CDC-095	201	n/a	n/a	480	6.6	<5	3.2	9.4	<100	2.7	1.2	<10	73.9	5.1	<1	<2	590
CDC-096	201	n/a	n/a	599	1.0	<5	13.0	10.4	<100	3.9	2.1	<10	34.3	3.4	6	8	<100
CDC-097	197	n/a	n/a	501	1.0	<5	4.6	6.9	<100	6.0	1.4	<10	40.4	5.3	2	8	<100
CDC-098	197	n/a	n/a	674	5.5	<5	6.0	7.1	<100	10.0	1.9	<10	42.2	6.6	9	11	100
CDC-099	197	8100	<5	27	5.2	<5	0.2	0.4	<100	<0.5	<0.5	<10	1.6	1.7	<1	<2	130
CDC-100	197	n/a	n/a	799	0.9	<5	4.5	4.8	<100	10.0	1.4	<10	35.1	4.7	6	8	<100
CDC-101	200	>10000	<5	300	14.3	<5	1.3	2.0	<100	<0.5	<0.5	<10	10.0	5.2	295	<2	21100
CDC-102	200	n/a	n/a	59	10.2	6	0.7	0.1	<100	<0.5	<0.5	<10	2.2	5.2	12	<2	2300
CDC-103	200	n/a	n/a	190	0.3	<5	3.4	6.9	<100	2.0	1.2	<10	26.0	3.0	<1	4	<100
CDC-104	199	n/a	n/a	370	0.7	<5	4.1	6.5	<100	2.0	0.8	<10	32.7	4.9	3	5	9800
CDC-105	198	n/a	n/a	140	0.6	<5	2.3	2.7	<100	<0.5	0.6	<10	8.0	2.1	3	<2	2900
CDC-106	198	>10000	<5	200	8.9	<5	2.8	2.7	<210	<0.5	0.6	<10	7.5	2.8	5	<2	13300
CDC-107	198	n/a	n/a	210	0.5	<5	5.3	6.5	<100	1.1	0.7	<10	24.1	3.1	4	3	3300
CDC-108	198	n/a	n/a	220	0.2	<5	3.2	7.5	<100	2.4	1.9	<10	39.3	2.2	5	5	460
CDC-109	196	n/a	n/a	11	1.8	<5	0.6	<1.7	<190	<0.5	<0.5	<10	1.1	70.6	23	<2	430
CDC-110	196	n/a	n/a	200	0.3	<5	8.2	4.9	<100	0.8	0.6	<10	17.0	2.0	7	2	<100
CDC-111	196	n/a	n/a	629	0.2	<5	8.8	4.4	<100	0.7	0.6	<10	15.0	6.0	50	<2	<100
CDC-112	209	n/a	<5	240	0.7	<5	3.1	3.7	<100	0.7	0.6	<10	10.0	1.9	36	<2	110
CDC-113	196	n/a	n/a	230	10.0	<5	11.0	5.7	<100	0.8	0.8	<10	17.0	2.1	5	3	120

Table A-28 Analysis of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CDC-114	196	n/a	<5	<5	9.2	<5	0.5	0.5	<340	<0.5	<0.5	<10	0.6	22.3	99	<2	700
CDC-115	196	127	n/a	<5	7.1	8	<0.2	<1.3	<320	<0.5	<0.5	<10	0.7	53.8	43	<2	520
CDC-117	195	30	<5	12	6.0	10	0.7	<1.4	<260	<0.5	<0.5	<10	0.3	57.2	20	<2	1500
CDC-118	195	n/a	n/a	180	1.3	<5	10.0	4.9	<100	0.8	0.6	<10	17.0	2.5	<1	<2	110
CDC-119	195	n/a	n/a	170	1.6	<5	13.0	5.7	<100	1.0	1.0	<10	11.0	2.7	5	3	<100
CDC-122	195	n/a	n/a	616	0.9	<5	7.4	5.1	<100	1.0	0.7	<10	15.0	2.8	20	<2	240
CDC-123	194	n/a	n/a	500	0.7	<5	7.3	5.2	<100	0.8	0.7	<10	19.0	2.0	9	<2	<100
CDC-124	194	n/a	n/a	18	2.4	9	<0.2	0.4	<140	<0.5	<0.5	<10	3.1	11.0	4	<2	10600
CDC-125	194	n/a	n/a	25	7.1	<5	4.4	8.5	<100	<0.5	1.3	<10	6.6	33.5	4	5	340
CDC-126	194	n/a	<5	<12	2.6	57	<0.2	0.2	4400	<0.5	<0.5	<30	<0.8	6.3	1850	<2	4000
CDC-127	194	n/a	n/a	<10	28.3	170	<0.2	<0.6	1800	<0.5	<0.5	<30	<0.6	23.7	435	<2	3800
CDC-129	194	n/a	n/a	8	2.7	11	<0.2	0.3	<120	<0.5	<0.5	<19	1.1	16.0	5	<2	300
CDC-132	193	n/a	n/a	<5	13.7	64	<0.2	<0.4	5300	<0.5	<0.5	<10	<0.2	18.0	73	<2	3100
CDC-133	193	n/a	30	<13	<1.1	<12	<0.2	0.9	970	<0.5	<0.5	<41	<0.9	<0.6	2150	<5	730
CDC-134	193	34	n/a	10	3.9	23	<0.2	<0.6	4900	<0.5	<0.5	<10	<0.5	23.6	1530	<2	3900
CDC-138	192	94	5	<5	1.6	13	0.5	1.1	<100	<0.5	<0.5	<10	<0.5	9.3	1760	<2	140
CDC-139	192	n/a	n/a	<5	19.0	11	0.3	1.6	<100	<0.5	<0.5	<10	0.6	14.0	11	<2	120
CDC-140	192	>10000	n/a	<5	63.5	130	<0.2	<0.1	<100	<0.5	<0.5	<23	0.8	10.0	18	<2	42000
CDC-141	190	1700	n/a	<5	10.4	<5	<0.2	<0.1	<100	<0.5	<0.5	<16	0.3	7.0	5	<2	440
CDC-142	190	>10000	<5	<16	387.0	330	<0.6	<0.1	<430	<0.5	<0.5	130	<0.9	4.9	24	<2	11.1%
CDC-143	190	n/a	<5	9	1.8	<5	0.8	1.0	1700	<0.5	<0.5	<10	0.8	17.0	134	<2	680
CDC-144	190	n/a	n/a	<5	15.1	19	<0.2	<0.1	<100	<0.5	<0.5	45	<0.2	7.6	13	<2	350
CDC-146	190	1700	n/a	81	29.0	<5	0.5	1.1	<230	<0.5	<0.5	<10	0.4	20.6	9	<2	2100
CDC-147	190	n/a	<5	72	114.0	<5	0.8	1.1	<280	<0.5	<0.5	<24	2.6	26.8	516	<2	390
CDC-148	189	n/a	n/a	150	2.4	<5	2.4	3.8	<100	<0.5	<0.5	<10	11.0	3.1	6	3	130
CDC-149	190	n/a	n/a	13	3.2	<5	1.3	6.1	<220	<0.5	0.7	<10	11.0	65.4	27	<2	600
CDC-150	190	n/a	n/a	<5	2.8	5	2.0	0.4	<170	<0.5	<0.5	<20	1.6	8.6	50	<2	1200
CDC-151	195	n/a	n/a	140	0.2	<5	3.6	2.0	<100	<0.5	<0.5	<10	6.2	0.9	6	<2	<100
CDC-152	195	n/a	n/a	190	0.4	<5	9.1	5.3	<100	1.1	0.7	<10	19.0	1.7	6	<2	<100
CDC-154	190	n/a	<5	90	1.9	<5	5.5	4.9	<220	1.4	<0.5	<10	18.0	10.0	27	4	450
CDC-155	188	n/a	n/a	270	0.3	<5	2.7	6.2	<100	1.8	0.9	<10	27.5	3.1	1	3	870
CDC-156	188	n/a	n/a	100	15.8	<5	4.2	6.4	950	1.8	0.8	<10	29.3	3.4	11	3	21400
CDC-157	185	n/a	n/a	210	3.7	<5	2.5	3.7	<100	1.6	0.9	<10	20.5	11.0	5	3	1700
CDC-158	185	n/a	n/a	56	0.7	<5	2.3	28.5	<100	0.6	7.4	<10	3.9	21.7	5	33	130
CDC-159	187	n/a	<5	240	1.2	<5	10.0	3.5	<100	0.5	0.7	<10	3.5	5.4	15	2	1500
CDC-160	187	n/a	n/a	38	0.4	<5	1.1	0.8	<100	<0.5	<0.5	<10	1.9	2.0	4	<2	<100
CDC-161	186	2.75%	n/a	470	5.2	<5	3.7	7.1	<100	3.0	1.4	<10	49.0	6.3	3	2	1.49%
CDC-162	186	.03%	n/a	400	0.3	<5	3.5	6.9	<100	3.7	1.7	<10	42.0	3.2	1	5	1000
CDC-163	186	.01%	n/a	36	0.4	<5	1.5	5.5	<100	<0.5	1.2	<10	5.7	6.4	<1	4	<100

(% indicates analysis by ICP)



Table A-2B Analysis of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CDC-164	186	.01%	n/a	514	0.7	<5	23.2	7.9	<100	0.8	1.0	<10	6.4	3.4	3	3	320
CDC-165	186	.08%	n/a	190	0.6	<5	1.4	2.6	<100	0.8	<0.5	<10	15.0	4.0	3	<2	260
CDC-166	184	.02%	n/a	380	0.3	<5	3.4	6.8	<100	2.2	1.7	<10	31.3	2.9	3	6	<100
CDC-167	184	.02%	n/a	340	0.4	<5	3.1	5.4	<100	1.9	1.2	<10	12.0	2.7	4	5	<100
CDC-168	184	<.01%	n/a	360	0.4	<5	4.1	8.6	<100	2.4	1.9	<10	58.8	3.4	3	6	<100
CDC-169	184	.03%	n/a	140	0.3	<5	3.0	5.5	<100	0.7	1.5	<10	21.5	10.0	3	5	<100
CDC-170	184	<.01%	n/a	130	0.3	<5	4.7	2.6	<100	<0.5	0.6	<10	4.4	4.3	10	2	<100
CDC-171	183	.15%	n/a	420	0.4	<5	3.8	10.0	<100	1.7	1.9	<10	41.9	6.2	6	5	1400
CDC-172	174	.44%	n/a	190	0.4	<5	3.0	5.6	<100	3.4	1.4	<10	34.4	4.6	2	6	340
CDC-173	173	<.01%	n/a	<21	41.8	<13	<0.4	3.0	<500	<0.5	<0.5	<60	1.4	33.5	55	28	6300
CDC-174	173	<.01%	n/a	54	<0.1	<5	1.1	0.9	3000	<0.5	<0.5	<25	1.9	26.4	3480	<2	1400
CDC-175	173	1.19%	n/a	50	0.7	15	9.4	12.0	<100	1.8	1.5	<10	29.5	5.2	47	2	3700
CDC-176	165	9.48%	n/a	420	1.7	<5	1.7	4.4	<100	0.6	1.2	<10	42.2	6.5	45	2	610
CDC-177	165	.09%	n/a	280	0.3	<5	2.3	5.4	<100	0.9	0.8	<10	23.3	2.0	3	<2	<100
CDC-178	165	.01%	n/a	290	0.4	<5	3.2	10.0	<100	1.2	1.4	<10	29.4	1.6	3	2	<100
CDC-179	151	.02%	n/a	470	0.1	<5	2.9	8.6	<100	4.1	2.3	<10	53.9	5.4	2	9	<100
CDC-180	151	<.01%	n/a	818	0.3	<5	7.6	10.9	<100	8.4	3.0	<10	47.5	9.0	6	17	<100
CDC-181	152	4.00%	n/a	<5	27.7	35	1.3	0.8	<100	<0.5	<0.5	<10	2.8	24.0	17	<2	1.05%
CDC-182	152	1.60%	n/a	25	0.6	<5	0.3	0.6	<100	<0.5	<0.5	<10	1.4	10.0	2	2	150
CDC-183	153	.09%	n/a	31	12.7	<5	2.2	1.1	<100	<0.5	<0.5	<10	2.4	6.2	26	5	210
CDC-184	155	.01%	n/a	81	47.1	<5	4.2	3.1	<100	<0.5	<0.5	<10	8.0	1.6	22	2	230
CDC-185	155	<.01%	n/a	190	0.9	<5	10.0	6.7	<100	1.0	1.0	<10	19.0	2.2	1	2	<100
CDC-186	154	.10%	n/a	110	915.0	<5	2.2	2.8	<100	<0.5	<0.5	<10	4.0	31.1	59	15	1.28%
CEM-01	653	n/a	n/a	51	0.4	<5	7.5	5.3	<100	0.6	0.6	<10	7.6	1.9	1	2	100
CEM-03	403	n/a	n/a	58	0.7	<5	4.8	2.7	<100	0.6	0.6	<10	6.0	2.4	4	3	<100
CEM-04	402	n/a	n/a	11	1.5	<5	1.5	1.0	<100	<0.5	0.5	<10	1.3	26.1	4	3	<100
CEM-05	402	n/a	n/a	39	1.7	<5	2.8	1.5	<100	<0.5	<0.5	<10	3.6	2.1	3	<2	<100
CEM-06	402	n/a	n/a	<5	1.0	<5	0.8	0.3	<100	<0.5	<0.5	<10	0.8	1.0	3	<2	<100
CEM-07	396	n/a	n/a	42	0.7	<5	0.6	<0.2	<100	<0.5	<0.5	<10	1.0	11.0	4	<2	<100
CEM-08	396	n/a	n/a	77	171.0	<5	1.7	2.3	<100	<0.5	<0.5	<24	10.0	18.0	12	5	<100
CEM-10	396	n/a	n/a	<5	2.0	<5	<0.2	<0.1	<100	<0.5	<0.5	<10	0.3	2.7	<1	<2	<100
CEM-11	396	n/a	n/a	260	1.5	<5	4.7	7.5	<100	1.3	1.1	<10	20.0	8.0	10	4	250
CEM-12	399	n/a	n/a	130	3.1	<5	12.0	10.7	<100	<0.5	0.9	<27	10.0	4.5	86	8	16000
CEM-13	399	n/a	n/a	75	1.6	<5	4.4	4.8	<100	<0.5	0.5	<10	6.6	2.7	12	3	<100
CEM-14	399	n/a	n/a	160	0.9	<5	8.3	8.1	<100	1.0	1.0	<10	11.0	2.8	6	5	270
CEM-15	398	n/a	n/a	<5	2.3	<5	0.3	0.2	<100	<0.5	<0.5	<10	0.6	2.6	2	<2	<100
CEM-16	398	n/a	n/a	260	3.1	<5	20.0	7.8	<100	1.7	1.3	<10	9.3	16.0	12	5	150
CEM-17	398	n/a	n/a	9	8.2	<5	1.1	2.2	<100	<0.5	0.6	32	0.8	4.3	5	2	<100
CEM-18	397	n/a	n/a	34	0.8	<5	1.4	1.4	<100	<0.5	<0.5	<10	1.9	1.7	8	<2	<100

(% indicates analysis by (ICP))

Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CEM-19	397	n/a	n/a	50	0.9	<5	3.3	1.7	<100	0.9	<0.5	<10	5.5	2.1	10	<2	<100
CEM-20	394	n/a	n/a	<5	7.1	<5	0.5	1.2	<100	<0.5	<0.5	<10	1.1	5.8	5	<2	<100
CEM-21	395	n/a	n/a	81	0.9	<5	1.8	1.7	<100	<0.5	<0.5	<10	6.6	1.6	4	<2	<100
CEM-22	394	n/a	n/a	27	1.8	<5	2.7	5.2	<100	0.6	0.6	<10	13.0	4.5	7	3	<100
CEM-23	394	n/a	n/a	9	1.0	<5	1.0	1.5	<100	<0.5	<0.5	<10	6.0	3.8	4	<2	<100
CEM-24	393	n/a	n/a	90	1.2	<5	3.4	1.7	<100	<0.5	<0.5	<10	3.6	2.4	2	<2	<100
CEM-25	371	n/a	n/a	260	0.8	<5	6.3	11.4	<100	1.3	1.4	<10	11.0	2.0	1	5	<100
CEM-26	371	n/a	n/a	<5	0.5	<5	0.4	1.2	<100	<0.5	<0.5	<10	<0.2	6.0	9	<2	2000
CEM-28	392	n/a	n/a	6	1.0	<5	1.0	0.5	<100	<0.5	<0.5	<10	1.7	11.0	1	<2	<100
CJO-01	381	n/a	n/a	190	1.9	<5	2.7	34.0	<100	1.2	2.9	<10	81.7	7.9	1	6	330
CJO-02	382	1400	n/a	37	1.7	<5	1.6	1.1	<100	<0.5	0.5	<10	0.9	17.0	7	4	190
CJO-03	388	9000	n/a	28	2.7	<5	1.5	<0.9	<100	<0.5	<0.5	<10	2.3	35.6	6	<2	5300
CJO-04	387	n/a	n/a	10	1.7	<5	1.1	0.8	<100	<0.5	<0.5	<10	1.2	2.6	<1	<2	<100
CJO-05	389	n/a	n/a	27	4.7	<5	0.4	1.0	<100	<0.5	<0.5	<10	1.8	6.8	<1	<2	<100
CJO-06	386	550	n/a	8	0.6	<5	0.2	0.3	<100	<0.5	<0.5	<10	0.8	3.8	<1	<2	<100
CJO-07	390	3400	n/a	24	0.6	<5	0.5	0.5	<100	<0.5	<0.5	<10	1.7	3.8	2	<2	<100
CJO-08	380	n/a	n/a	40	0.2	<5	1.4	2.4	<100	5.8	0.7	<10	61.1	21.8	7	4	210
CJO-09	379	n/a	n/a	43	0.6	<5	<0.2	0.9	<100	<0.5	<0.5	91	2.6	13.0	3	<2	280
CJO-10	383	>10000	n/a	11	24.9	<5	<0.2	<0.5	<100	<0.5	<0.5	<23	0.9	31.9	5	<2	780
CJO-11	384	n/a	n/a	81	3.8	<5	2.0	2.9	<100	<0.5	<0.5	<10	5.4	5.3	12	2	<100
CJO-12	385	830	n/a	130	30.2	<5	16.0	6.1	<100	0.5	1.2	<10	5.4	22.0	12	4	170
CJO-13	391	282	<5	<5	0.3	<5	3.7	7.5	<100	0.6	1.0	<10	53.0	40.3	337	<2	800
CJO-14	432	n/a	n/a	200	0.1	<5	2.2	10.0	<100	<0.5	1.2	<10	78.1	8.5	<1	<2	<100
CJO-15	433	n/a	n/a	140	1.1	<5	1.4	1.0	<100	<0.5	<0.5	<10	8.9	4.3	4	<2	380
CJO-16	433	n/a	n/a	210	3.7	<5	6.2	7.3	<100	<0.5	0.9	<10	31.7	4.7	4	<2	120
CJO-17	435	n/a	n/a	96	0.8	<5	0.9	0.4	<100	<0.5	<0.5	<10	2.0	3.1	7	<2	120
CJO-18	439	750	n/a	160	345.0	<5	4.5	4.1	<230	<0.5	<0.5	<33	1.7	<0.7	8	9	<100
CJO-19	438	900	n/a	88	33.9	<5	0.9	0.8	<100	<0.5	<0.5	<10	2.4	1.9	2	<2	320
CJO-20	437	57	n/a	120	0.6	<5	0.8	0.5	<100	<0.5	<0.5	<10	0.9	4.1	413	<2	<100
CJO-21	572	n/a	n/a	130	1.4	<5	15.0	2.5	<100	<0.5	<0.5	<10	2.1	1.1	10	<2	220
CJO-22	571	950	n/a	81	0.4	<5	1.6	0.9	<100	<0.5	<0.5	<10	2.4	2.1	5	<2	280
CJO-23	570	122	n/a	73	0.2	<5	2.0	1.5	<100	<0.5	<0.5	<10	2.8	0.5	4	<2	110
CJO-24	569	n/a	n/a	240	0.4	<5	2.3	2.2	<100	1.0	<0.5	<10	5.4	0.9	6	<2	110
CJO-25	431	210	n/a	210	505.0	<5	1.3	2.0	<340	0.8	<0.5	<40	6.6	8.8	<37	<4	310
CJO-26	434	40	n/a	<5	3.1	<5	<0.2	<0.1	<100	<0.5	<0.5	<10	0.2	3.7	2	<2	<100
CJO-27	434	49	n/a	<5	1.6	9	<0.2	<0.1	<100	<0.5	<0.5	<10	<0.2	4.5	2	<2	<100
CJO-28	436	n/a	n/a	250	0.9	<5	5.1	3.6	<100	0.8	<0.5	<10	13.0	1.7	7	<2	<100
CJO-29	430	n/a	n/a	180	3.2	<5	3.9	3.0	<100	0.7	<0.5	<10	10.0	4.4	1	<2	<100
CJO-30	428	n/a	n/a	160	56.9	<5	3.8	1.0	<100	<0.5	<0.5	<10	2.8	8.2	2	<2	<100
CJO-31	429	2870	n/a	110	10.6	<5	2.1	1.5	<100	<0.5	<0.5	<10	2.4	3.3	1	<2	<100
CJO-32	574	n/a	n/a	88	1.0	<5	3.9	2.2	<100	<0.5	<0.5	<10	2.5	0.4	8	<2	<100

Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CJO-33	573	n/a	n/a	<5	0.9	<5	<0.2	0.2	<100	<0.5	<0.5	<10	<0.2	<0.2	<1	<2	<100
CJO-34	427	n/a	n/a	230	45.8	<5	3.3	1.3	<100	<0.5	<0.5	<10	6.3	19.0	3	<2	1400
CMH-1	698																
CMH-2	698	n/a	n/a	81	3.2	<5	11.0	20.2	<100	0.6	1.5	<10	18.0	1.8	<1	3	<100
CMH-3	699	n/a	n/a	200	2.8	<5	2.4	10.0	<100	3.7	1.5	<10	20.0	4.7	<1	5	<100
CMH-4	697	n/a	n/a	120	2.6	<5	2.1	3.6	<100	1.8	<0.5	<10	15.0	2.4	1	<2	<100
CMH-5	695	n/a	n/a	230	1.4	<5	2.3	11.0	<100	4.1	2.1	<10	22.9	3.7	2	5	160
CMH-6	695	n/a	n/a	200	1.5	<5	2.5	10.9	<100	3.9	1.7	<10	22.7	3.8	1	5	190
CMH-10	696	n/a	n/a	65	54.7	<5	16.0	6.9	<100	0.7	0.9	<10	6.9	1.8	<1	4	<100
CMH-11	696	n/a	n/a	<5	53.4	<5	<0.2	<0.6	<100	<0.5	<0.5	<10	1.0	24.3	<1	<2	<100
CMH-12	696	n/a	n/a	74	21.6	<5	11.0	5.4	<100	0.7	0.5	<10	7.0	1.9	<1	<2	140
CMH-13	696	n/a	n/a	39	4.2	<5	17.0	12.0	<100	1.7	1.5	<10	8.4	2.6	<1	2	<100
CMH-14	696	n/a	n/a	33	2.4	<5	14.0	7.3	<100	1.4	1.1	<10	6.0	2.8	<1	2	<100
CMM-1-A	111	n/a	<5	230	14.6	<5	7.7	3.6	<100	0.8	<0.5	<10	6.0	5.2	20	3	21100
CMM-1-B	111	850	n/a	78	35.3	<5	3.2	1.2	<100	<0.5	<0.5	<10	3.4	5.1	12	2	6900
CMM-1-C	111	830	n/a	120	38.5	10	4.5	1.8	<100	<0.5	<0.5	<10	4.5	4.9	14	<2	9900
CMM-1-D	111	1500	n/a	110	31.5	9	4.2	1.7	<100	<0.5	<0.5	<10	3.7	3.9	10	<2	5800
CMM-2-A	3	425	n/a	16	108.0	<5	1.7	2.4	<220	0.6	<0.5	<33	2.0	14.0	3	6	75600
CMM-2-B	3	1300	5	57	368.0	<11	5.4	<8.9	<300	<0.5	1.3	<53	6.5	212.0	<310	<7	28200
CMM-2-C	3	700	n/a	<21	57.6	<11	1.7	0.3	<310	<0.5	<0.5	<47	20.0	57.5	<3	8	14600
CMM-2-D	3	415	n/a	25	451.0	<15	8.7	<59.0	<360	<0.5	3.8	<110	3.8	1570.0	<410	<8	39200
CMM-2-E	3	950	n/a	47	320.0	<5	5.1	<7.2	<200	<0.5	1.4	<34	9.2	167.0	<240	<5	32200
CMM-2-F	3	1.57%	n/a	45	233.0	<5	4.3	8.1	<100	<0.5	3.0	<33	7.6	81.0	<310	<5	7.59%
CMM-3-A	70	n/a	n/a	22	23.2	<5	1.3	1.0	<100	<0.5	<0.5	<10	1.2	0.9	4	<2	240
CMM-3-B	70	n/a	n/a	27	0.7	<5	1.7	1.2	<100	<0.5	<0.5	<10	1.6	<0.6	6	<2	420
CMM-3-C	70	n/a	n/a	190	1.0	<5	18.0	14.0	<100	2.6	1.9	<10	21.6	8.5	4	7	120
CMM-3-D	70	n/a	n/a	130	1.6	<5	13.0	10.9	<100	1.8	1.6	<10	23.7	5.3	<1	5	<100
CMM-3-E	70	n/a	n/a	110	2.6	<5	11.0	10.0	<100	2.0	1.7	<10	21.0	5.1	<1	4	<100
CMM-4-A	72	>10000	n/a	<13	215.0	<5	0.7	0.5	<220	<0.5	<0.5	<31	0.9	2.7	9	4	16.5%
CMM-4-B	72	9000	n/a	18	40.3	<5	1.9	1.2	<100	<0.5	<0.5	<10	1.4	3.1	8	<2	5100
CMM-4-C	72	7.9%	n/a	17	194.0	<5	0.5	0.3	<200	<0.5	<0.5	<28	0.8	5.8	<3	<8	11.4%
CMM-4-D	72	1780	<5	12	6.9	<5	1.1	1.2	<100	<0.5	<0.5	<10	1.5	2.3	2	<2	4200
CMM-5-C	73	1250	<5	<5	1.6	<5	1.2	1.2	<100	<0.5	<0.5	<10	1.1	2.0	<1	<2	5400
CMM-5-D	73	1.97%	n/a	10	14.1	<5	2.6	1.4	<100	0.5	<0.5	<10	3.1	7.1	9	<2	64600
CMM-7-A	71	>10000	<5	140	15.3	<5	5.6	3.8	<100	<0.5	<0.5	<10	10.0	2.2	2	<2	1900
CMM-8-A	55	510	n/a	190	38.0	<5	9.0	7.8	<100	0.9	0.8	<10	12.0	7.2	988	5	210
CMM-8-B	55	78	n/a	83	66.9	<5	7.4	6.3	<100	<0.5	0.8	<10	6.3	11.0	237	4	200
CMM-8-C	55	27	n/a	200	69.3	<5	23.9	5.3	<100	<0.5	0.8	<10	3.9	11.0	257	5	120
CMS-8-D	60	n/a	n/a	130	8.0	<5	16.0	18.5	<100	1.2	2.5	<10	62.8	7.9	35	6	150
CMM-8-E	58	63	n/a	71	53.9	<5	2.4	2.9	<100	<0.5	<0.5	<10	4.3	8.0	698	<2	210
CMM-8-F	58	125	n/a	46	140.0	<5	2.8	3.0	<100	<0.5	0.9	<26	2.7	6.7	13	<2	390

Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CMM-8-G	58	20	n/a	110	3.8	<5	4.3	3.0	<100	<0.5	<0.5	<10	6.8	1.4	41	<2	250
CMM-8-H	61	n/a	n/a	260	19.4	<5	9.1	4.3	<100	2.2	0.7	<10	4.9	7.5	14	<2	360
CMM-8-I	59	n/a	n/a	230	18.0	<5	3.0	7.7	<100	0.7	1.8	<10	3060.0	7.7	4	7	<100
CMM-8-J	59	n/a	n/a	270	25.0	<5	3.2	10.0	<100	0.7	2.0	<10	16.0	6.3	1440	6	<100
CMM-8-K	59	n/a	n/a	180	64.0	<5	6.5	7.3	<210	<0.5	0.6	<29	21.9	6.8	2820	4	130
CMM-8-L	59	n/a	<5	93	69.2	<5	5.2	3.9	<100	<0.5	0.7	<10	6.1	20.0	220	4	<100
CMM-8-M	59	n/a	n/a	81	4.2	<5	9.3	10.2	<100	1.6	1.3	<10	29.5	4.7	7	2	<100
CMM-8-N	56	n/a	n/a	130	28.6	<5	8.2	6.2	<100	1.2	0.7	<10	15.0	9.2	143	<2	190
CMM-8-O	56	n/a	n/a	210	0.8	<5	9.3	8.6	<100	0.8	0.9	<10	22.2	4.7	<1	2	340
CMM-8-P	60	n/a	n/a	150	26.1	<5	1.9	2.4	<100	<0.5	<0.5	<10	7.7	3.3	5	<2	110
CMM-8-Q	61	n/a	n/a	200	0.8	<5	2.0	2.8	<100	0.5	<0.5	<10	10.0	2.5	1	<2	<100
CMM-8-R	63	n/a	n/a	67	0.7	<5	6.2	25.1	<100	<0.5	1.5	<10	13.0	4.7	2	<2	<100
CMM-8-S	62	n/a	n/a	200	59.9	<5	8.3	5.8	<100	0.8	0.7	<10	3.9	3.7	11	<2	100
CMM-8-T	57	210	n/a	75	64.6	<5	10.0	2.1	<100	<0.5	<0.5	<10	5.4	3.3	248	<2	500
CMM-8-U	57	34	n/a	67	50.1	<5	28.4	3.8	<100	<0.5	0.6	<10	10.0	6.1	338	<2	540
CMM-8-V	50	430	n/a	65	195.0	<5	3.5	3.2	<200	<0.5	0.6	<29	4.0	6.9	90	<2	600
CMM-8-W	55	n/a	n/a	79	1.1	<5	25.3	7.9	<100	1.0	1.4	<10	6.2	1.6	2	4	660
CMM-8-X	55	n/a	n/a	140	320.0	<5	5.1	7.5	<260	0.8	0.9	<36	27.1	20.2	519	6	790
CMM-8-Y	56	n/a	n/a	170	7.9	<5	5.6	7.9	<100	<0.5	0.8	<10	33.7	5.1	4	<2	130
CMM-8-ZA	56	n/a	n/a	<10	24.8	<19	123.0	<0.5	<510	<0.5	<2.1	<87	15.0	16.0	16.5%	<8	600
CMM-9-A	52	57	n/a	<5	6.5	<5	0.4	0.7	<100	<0.5	0.7	<10	<0.2	0.7	5	<2	10.6%
CMM-9-B	52	2850	<5	<17	66.2	61	<0.9	0.2	<230	<0.5	<0.5	<31	<0.8	4.0	37	<2	4.61%
CMM-9-C	52	680	n/a	<15	92.0	<5	<0.8	0.5	<220	<0.5	<0.5	<41	<0.8	1.7	14	<2	32.5%
CMM-9-D	53	50	n/a	<11	69.8	7	1.0	<0.6	<100	<0.5	<0.5	<23	<0.5	23.8	17	3	1500
CMM-10-27	33	450	n/a	1300	12.2%	<470	<12.7	<590.0	<15000	<23.0	<14.0	<5000	<44.0	<3600.0	10.0%	<2000	<14000
CMM-10-28	33	320	n/a	<37	1010.0	<13	<0.2	0.4	<540	<0.5	<0.5	<64	1.2	<2.1	<60	<7	410
CMM-10-29	48	110	n/a	43	81.6	<5	2.4	27.2	<200	0.7	1.6	<22	7.8	5.5	217	<2	<100
CMM-10-30	39	8	n/a	160	1.7	<5	13.0	17.9	<100	0.9	1.4	<10	27.4	6.5	24	<2	130
CMM-10-31	47	10	n/a	120	20.0	<5	4.0	2.2	<100	<0.5	<0.5	<10	4.9	2.2	148	<2	260
CMM-10-32	47	7	n/a	150	5.4	<5	2.7	4.4	<100	2.9	0.5	<10	9.2	1.2	5	<2	<100
CMM-10-33	46	900	n/a	<52	1560.0	<20	<0.5	<0.3	<790	<0.5	<0.5	<94	<1.5	<3.3	<98	<18	190
CMM-10-34	46	n/a	n/a	<49	1210.0	<18	<0.5	<0.2	<710	<0.5	<0.5	<85	<1.3	<3.0	<220	<10	830
CMM-10-35	46	66	n/a	270	12.1	<5	3.6	2.1	<100	<0.5	<0.5	<10	3.9	1.2	2	2	100
CMM-10-36	46	163	n/a	1280	45.1	<5	0.9	0.9	<100	<0.5	<0.5	<10	0.8	0.8	5	<2	320
CMM-10-37	46	2800	<5	130	2340.0	<26	<0.6	<0.3	<1000	<1.1	<0.5	<120	<1.9	<4.3	<120	<14	330
CMM-10-38	45	>10000	n/a	250	55.7	<5	0.9	0.6	<100	<0.5	<0.5	<10	<0.2	0.6	741	<2	2800
CMM-10-39	34	7100	n/a	<100	5260.0	<100	<1.9	<0.7	<3200	<3.1	<2.0	<380	<7.2	7.6	<51	<97	710
CMM-10-40	34	28	n/a	6	27.0	<5	<0.2	0.3	<100	<0.5	<0.5	<10	0.3	0.7	2	<2	<100
CMM-10-41	33	1.01%	n/a	642	3790.0	<71	<1.4	<0.5	<2300	<2.2	<1.4	<270	<5.0	11.0	<37	<83	280
CMM-10-42	33	160	n/a	33	68.9	<5	1.4	1.1	n.s.s	<0.5	<0.5	<10	1.6	1.0	3	<2	120
CMM-10-43	36	5	n/a	230	0.5	<5	7.3	3.6	<100	0.6	0.6	<10	8.3	1.4	8	<2	110



Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CMM-10-44	36	4800	<5	51	1540.0	<42	<0.7	0.4	<1300	<1.1	<0.5	<130	<2.8	3.5	<6	<41	350
CMM-10-45	34	34	n/a	29	45.5	<5	2.0	2.2	<100	<0.5	<0.5	<10	3.1	8.6	410	<2	270
CMM-10-46	36	1000	n/a	250	19.7	<5	4.2	4.0	<100	1.4	0.7	<10	7.2	3.9	19	3	120
CMM-10-47	36	80	n/a	220	3.9	<5	4.6	10.2	<100	0.5	0.7	<10	46.9	2.9	5	<2	340
CMM-10-48	34	18	n/a	21	20.2	<5	1.2	1.4	<220	<0.5	<0.5	<22	2.2	1.7	850	<2	<100
CMM-10-49	34	3	n/a	5	3.5	<5	0.3	1.1	<100	<0.5	<0.5	<10	1.9	1.0	<1	<2	<100
CMM-10-50	36	21	n/a	160	1.0	<5	2.8	4.2	<100	0.7	<0.5	<10	16.0	1.9	7	<2	430
CMM-10-51	36	6	n/a	150	1.5	<5	5.6	3.7	<100	1.1	0.7	<10	7.5	1.7	3	<2	140
CMM-10-D	48	n/a	n/a	84	854.0	<15	3.6	8.5	<510	<0.5	<0.5	<72	6.0	4.9	39	<22	<220
CMM-10-E	*	n/a	n/a	220	1.3	<5	3.6	3.0	<100	1.4	<0.5	<10	9.5	4.0	14	<2	110
CMM-10-F	54	n/a	n/a	56	97.2	<5	7.7	1.5	<100	<0.5	<0.5	<23	2.9	9.4	857	<2	990
CMM-10-G	54	n/a	n/a	<5	21.0	<5	0.3	0.3	<100	<0.5	<0.5	<10	0.5	1.1	5	<2	<100
CMM-10-H	47	n/a	n/a	140	22.0	<5	5.4	3.0	<100	0.6	<0.5	<10	5.7	4.2	15	<2	140
CMM-10-I	47	n/a	n/a	61	75.4	<5	6.2	2.3	<210	0.7	0.5	<28	1.8	2.8	2960	<2	270
CMM-10-J	45	>10000	<5	658	61.2	<5	<0.2	<0.3	<100	<0.5	<0.5	<20	0.6	8.3	117	3	4300
CMM-10-K	45	860	n/a	616	82.7	<5	0.4	0.3	<100	<0.5	<0.5	<10	0.9	0.3	14	<2	360
CMM-10-L	45	2200	n/a	652	376.0	<5	0.3	0.6	<270	<0.5	<0.5	<32	1.0	<1.1	157	<2	620
CMM-10-M	45	>10000	n/a	460	485.0	<5	0.4	0.5	<340	<0.5	<0.5	<41	0.9	3.4	1220	<5	35400
CMM-10-N	45	>10000	<5	770	123.0	<5	0.4	0.4	<210	<0.5	<0.5	<24	0.6	1.4	204	4	2000
CMM-10-O	49	n/a	n/a	180	7.9	<5	10.0	8.1	<100	0.6	0.7	<10	18.0	5.7	5	<2	150
CMM-10-P	49	n/a	n/a	45	5.8	<5	2.2	3.5	<100	<0.5	1.0	<10	3.1	2.1	5	2	<100
CMM-10-Q	49	n/a	n/a	130	10.0	<5	4.4	5.9	<100	0.6	<0.5	<10	15.0	2.2	4	<2	<100
CMM-10-R	49	n/a	n/a	68	0.6	<5	27.1	64.1	<100	3.1	6.1	<10	159.0	12.0	<3	<2	<100
CMM-10-S	49	n/a	n/a	17	33.1	<5	1.5	2.4	<100	<0.5	<0.5	<10	1.7	3.1	4	<2	<100
CMM-10-T	33	7.63%	n/a	<210	6910.0	<89	<1.9	2.3	<3400	<3.5	<1.9	<420	<6.6	<16.0	<460	<47	17700
CMM-10-U	33	6500	n/a	<25	471.0	<5	0.2	0.2	<360	<0.5	<0.5	90	<0.7	4.0	<44	<5	1600
CMM-10-V	33	940	n/a	<68	2380.0	<27	<0.6	1.1	<1100	<1.1	<0.5	<130	<2.0	<4.4	190	<14	1000
CMM-10-W	33	>10000	n/a	25	488.0	<5	<0.2	0.3	<320	<0.5	<0.5	<61	0.9	3.1	<50	<7	11800
CMM-10-X	33	n/a	n/a	976	12.0	<5	0.4	0.3	<100	<0.5	<0.5	<10	<0.2	<0.2	3	<2	240
CMM-10-Y	33	350	n/a	1210	59.5	<5	1.3	1.2	<100	<0.5	<0.5	<10	2.5	1.0	11	3	460
CMM-10-Z	33	2.61%	n/a	<50	1460.0	<19	<0.6	<0.5	<760	<0.5	<0.5	<91	<1.4	11.0	<130	<10	56300
CMM-11-27	82	8900	n/a	<110	5210.0	<100	<1.9	0.8	<3200	<3.1	<2.0	<380	<7.0	12.0	288	<59	5300
CMM-11-28	82	109	n/a	17	11.3	<5	7.1	2.4	<100	<0.5	<0.5	<10	1.5	1.3	<1	<2	<100
CMM-11-29	82	31	n/a	6	2.1	<5	16.0	4.2	<100	<0.5	<0.5	<10	3.9	0.9	2	3	<100
CMM-11-30	92	3	n/a	20	5.0	<5	0.3	0.3	540	<0.5	<0.5	<10	0.4	1.1	280	<2	1100
CMM-11-31	92	1	n/a	<5	<0.1	<5	<0.2	0.2	<100	<0.5	<0.5	<10	<0.2	<0.2	<1	<2	<100
CMM-11-32	92	7	n/a	210	0.1	<5	4.4	6.4	<100	1.2	1.0	<10	20.0	2.3	3	3	<100
CMM-11-33	92	7	n/a	<5	13.6	<5	0.4	0.2	730	<0.5	<0.5	<10	<0.2	6.2	62	<2	220
CMM-11-34	89	n/a	n/a	68	6.0	<5	9.1	12.0	<100	1.4	1.3	<10	31.7	3.7	12	2	<100
CMM-11-35	78	4	n/a	100	0.9	<5	4.3	1.7	<100	<0.5	<0.5	<10	3.5	1.3	21	<2	1300
CMM-11-36	76	4	n/a	170	0.2	<5	3.8	6.2	<100	1.0	0.9	<10	19.0	1.6	4	3	<100

Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CMM-11-37	77	<1	n/a	<5	0.6	34	0.8	0.3	<100	<0.5	<0.5	<10	1.8	14.0	263	<2	1200
CMM-11-38	79	19	n/a	<5	0.1	<5	0.4	0.6	<100	<0.5	<0.5	<10	0.8	4.2	<1	<2	<100
CMM-11-39	74	n/a	n/a	12	0.8	<5	1.7	3.3	<100	<0.5	0.8	<10	0.9	2.0	4	3	<100
CMM-11-40	83	49	n/a	39	2.5	9	13.0	2.9	<100	<0.5	<0.5	<10	4.3	1.7	7	<2	1600
CMM-11-41	75	<1	n/a	170	1.5	<5	3.7	2.2	<100	<0.5	<0.5	<10	9.1	10.0	5	<2	970
CMM-11-42	75	16	<5	15	0.5	<5	2.3	1.4	150	0.6	<0.5	<10	4.6	19.0	11	<2	220
CMM-11-43	75	11	<5	11	0.6	<5	1.2	0.4	<100	<0.5	<0.5	<10	1.0	3.2	27	<2	500
CMM-11-44	76	<1	n/a	34	<0.1	<5	0.7	1.3	<100	<0.5	<0.5	<10	3.6	0.2	3	<2	<100
CMM-11-45	83	9	n/a	270	0.8	<5	27.2	4.7	<100	0.7	0.9	<10	3.9	0.4	4	3	130
CMM-11-46	83	153	n/a	130	1.3	22	4.3	2.0	<100	<0.5	<0.5	<10	1.8	2.8	84	<2	1500
CMM-11-47	83	>10000	n/a	450	1.9	<5	10.0	3.3	<100	0.5	<0.5	28	6.8	4.7	10	<2	12000
CMM-11-48	84	210	n/a	<5	1.9	15	1.1	0.9	<100	<0.5	<0.5	<10	1.0	0.2	177	<2	2300
CMM-11-49	84	1090	n/a	<5	1.4	<5	22.8	2.9	<100	<0.5	<0.5	<10	5.6	2.1	6	<2	16200
CMM-11-50	84	950	n/a	64	1.9	<5	25.7	5.4	<100	0.8	1.2	<10	6.4	1.0	3	<2	64300
CMM-11-51	84	1700	n/a	280	10.0	<5	23.6	4.6	<100	<0.5	<0.5	<10	4.9	0.7	8	3	32100
CMM-11-52	87	34	n/a	110	0.5	<5	14.0	5.5	<100	<0.5	0.8	<10	8.9	1.0	<1	2	330
CMM-11-53	87	14	n/a	<5	0.1	<5	4.0	0.6	<100	<0.5	<0.5	<10	0.3	0.3	<1	<2	<100
CMM-11-54	88	>10000	n/a	33	146.0	54	1.8	<0.2	<210	<0.5	<0.5	<20	1.5	10.0	10	<2	3000
CMM-11-55	85	620	n/a	<5	8.9	8	<0.2	0.2	<100	<0.5	<0.5	<10	0.6	0.8	5	<2	4900
CMM-11-56	85	215	n/a	310	1.8	<5	7.8	3.3	<100	0.6	0.5	<10	8.2	1.7	<1	<2	8700
CMM-11-57	85	13	n/a	<5	5.1	<5	2.3	0.1	<100	<0.5	<0.5	<10	0.5	0.6	<1	<2	<100
CMM-11-58	85	69	n/a	62	1.1	<5	22.6	9.3	<100	<0.5	1.2	<10	14.0	13.0	<1	4	220
CMM-11-59	86	4700	n/a	<40	2690.0	<36	<0.7	0.4	<1100	<1.2	<0.5	<170	<2.5	8.0	<26	<40	2100
CMM-11-60	86	50	n/a	10	9.4	<5	2.5	1.7	<100	<0.5	<0.5	<10	3.7	1.8	5	<2	<100
CMM-11-61	86	43	n/a	110	10.9	<5	19.0	5.1	<100	<0.5	0.8	<10	4.8	1.0	29	3	450
CMM-11-62	88	n/a	n/a	33	8.1	<5	10.0	7.2	<100	1.9	0.8	<10	17.0	4.1	15	2	490
CMM-11-A	91	n/a	n/a	54	1.6	<5	0.4	0.6	<100	<0.5	<0.5	<10	1.7	0.5	6	<2	<100
CMM-11-B	89	n/a	n/a	360	0.6	<5	3.2	5.2	<100	1.1	0.7	<10	15.0	2.0	15	2	<100
CMM-11-C	90	n/a	<5	<5	2.9	<5	1.8	0.1	<100	<0.5	<0.5	<10	1.0	11.0	52	<2	250
CMM-11-D	90	n/a	n/a	39	1.8	5	<0.2	0.1	<100	<0.5	<0.5	<10	<0.2	1.7	295	<2	200
CMM-11-E	89	n/a	n/a	110	2.4	<5	0.7	<0.4	<100	<0.5	<0.5	<10	0.4	19.0	183	<2	700
CMM-11-F	79	n/a	n/a	<5	<0.1	<5	0.9	1.0	<100	<0.5	<0.5	<10	0.2	0.3	<1	<2	250
CMM-11-G	81	146	n/a	12	2.1	6	18.0	4.6	<100	<0.5	0.9	14	5.4	2.2	4	<2	4600
CMM-11-H	81	105	n/a	90	1.8	<5	28.7	6.9	<100	<0.5	1.1	<10	8.5	1.0	<1	3	460
CMM-11-I	77	2	<5	<5	0.6	<5	4.9	1.0	<100	<0.5	<0.5	<10	4.1	2.4	<1	<2	<100
CMM-11-J	77	16	n/a	<5	0.3	<5	0.3	0.2	<100	<0.5	<0.5	<10	0.3	<0.2	<1	<2	<100
CMM-11-K	77	21	<5	110	5.7	<5	4.3	1.9	<100	0.6	<0.5	<10	5.8	6.3	86	<2	4000
CMM-11-L	77	14	n/a	180	0.4	<5	5.0	6.2	<100	0.8	0.9	<10	17.0	1.5	3	3	<100
CMM-11-M	93	>10000	<5	55	330.0	<14	3.8	1.4	<560	<0.5	<0.5	<50	6.6	7.3	<4	<14	69000
CMM-11-N	93	1700	n/a	280	17.7	<5	11.0	10.8	<100	2.6	1.6	<10	24.0	6.3	4	5	790
CMM-11-O	93	>10000	n/a	<15	239.0	<11	<0.2	<0.1	<430	<0.5	<0.5	<39	1.5	5.1	4	<6	3300

Table A-28 Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CMM-11-P	93	1670	<5	110	10.4	<5	5.5	5.5	<100	1.5	1.0	<10	13.0	3.3	2	4	110
CMM-11-Q	82	280	n/a	100	2.5	<5	21.8	5.9	<100	<0.5	1.0	16	4.5	0.5	<1	2	<100
CMM-11-R	82	340	n/a	<11	10.6	<5	1.0	0.2	<100	<0.5	<0.5	62	0.5	1.3	12	<2	<100
CMM-11-S	82	>10000	n/a	<5	30.7	11	<0.2	0.6	<100	<0.5	<0.5	<10	0.6	1.2	10	<2	85200
CMM-11-T	82	>10000	n/a	57	8.8	<5	7.2	2.3	<100	<0.5	<0.5	<10	3.5	1.7	<1	<2	63100
CMM-11-U	82	380	n/a	<5	1.9	<5	6.6	2.5	<100	<0.5	<0.5	<10	1.9	0.3	5	<2	270
CMM-11-V	81	320	n/a	<5	0.7	<5	0.2	0.2	<100	<0.5	<0.5	<10	0.4	1.3	1	<2	280
CMM-11-W	81	185	n/a	110	3.0	<5	19.0	6.1	<100	1.0	0.9	<10	9.3	3.7	<1	3	1500
CMM-12-A	44	n/a	n/a	30	1280.0	<25	1.3	4.2	<620	<0.5	<0.5	<88	2.6	<5.7	<340	<13	300
CMM-12-B	44	n/a	n/a	230	4.5	<5	25.8	12.1	<100	1.8	1.6	<10	26.5	4.2	<1	7	210
CMM-12-C	44	n/a	n/a	54	27.2	<13	5.2	2.5	<350	<0.5	<0.5	<47	<1.3	1.2	7170	<4	110
CMM-12-D	44	n/a	n/a	79	2.8	<5	43.4	5.0	<100	0.7	1.1	<10	0.8	<0.2	378	3	310
CMM-12-E	43	n/a	n/a	170	65.6	<5	4.7	3.0	<100	1.1	0.6	<10	6.3	2.2	7	<2	<100
CMM-12-F	43	n/a	n/a	60	150.0	<5	2.3	2.7	<260	<0.5	<0.5	<26	2.7	2.7	822	4	<100
CMM-13-A	42	n/a	n/a	70	3.3	<5	3.8	2.6	<100	0.6	<0.5	<10	4.5	1.4	<1	<2	130
CMM-13-B	42	n/a	n/a	350	8.9	<5	2.5	18.5	<100	<0.5	1.4	<10	61.6	5.2	2	<2	130
CMM-13-C	42	n/a	n/a	98	0.8	<5	3.6	11.7	<100	<0.5	1.2	<10	6.9	5.7	<1	3	<100
CMM-13-D	42	n/a	n/a	390	1.1	<5	7.2	3.0	<100	2.2	0.8	<10	9.3	7.4	6	3	<100
CMM-13-E	42	n/a	n/a	150	<0.1	<5	5.1	4.9	<100	1.1	0.6	<10	10.0	2.2	<1	<2	<100
CMM-14-27	27	9	n/a	<5	3.0	<5	0.3	0.4	<100	<0.5	<0.5	<10	0.7	0.8	<1	<2	<100
CMM-14-28	25	9	n/a	<5	1.3	<5	0.6	0.5	<100	<0.5	<0.5	<10	0.8	0.8	<1	<2	<100
CMM-14-29	25	40	n/a	<5	18.5	<5	<0.2	<0.1	<100	<0.5	<0.5	<10	<0.2	1.4	<1	<2	<100
CMM-14-30	25	43	n/a	<5	5.2	<5	<0.2	0.1	<100	<0.5	<0.5	<10	<0.2	0.7	<1	<2	<100
CMM-14-31	27	264	n/a	<13	342.0	<12	<0.2	0.5	<390	<0.5	<0.5	<40	<0.8	1.9	<2	<8	<100
CMM-14-32	27	26	n/a	<5	27.7	<5	<0.2	0.4	<100	<0.5	<0.5	<10	0.4	1.1	<1	<2	<100
CMM-14-33	27	5	n/a	<5	2.1	<5	<0.2	0.1	<100	<0.5	<0.5	<10	<0.2	0.4	<1	<2	<100
CMM-14-34	27	6	n/a	<5	2.6	<5	<0.2	0.2	<100	<0.5	<0.5	<10	0.3	1.0	<1	<2	<100
CMM-14-35	25	770	n/a	<5	55.6	<5	0.2	0.2	<100	<0.5	<0.5	<10	1.0	1.6	<1	<2	150
CMM-14-36	25	147	n/a	8	39.8	<5	<0.2	0.1	<100	<0.5	<0.5	<10	<0.2	0.9	<1	<2	<100
CMM-14-41	30	10	n/a	23	2.6	<5	1.5	0.4	<100	<0.5	<0.5	<10	1.2	4.9	1	<2	<100
CMM-14-42	30	2	n/a	<5	0.9	<5	0.5	0.3	<100	<0.5	<0.5	<10	0.5	1.2	<1	<2	<100
CMM-14-43	30	4800	n/a	47	1330.0	<29	<0.6	0.6	<940	<0.5	<0.5	<96	<2.0	3.8	23	<28	580
CMM-14-44	24	89	n/a	6	30.7	<5	0.5	0.5	<100	<0.5	<0.5	<10	0.9	1.1	44	<2	<100
CMM-14-A	19	860	n/a	<46	1530.0	<40	<0.9	1.1	<1300	<1.4	<0.5	<150	3.4	<3.1	1460	<23	<450
CMM-14-B	32	195	n/a	<5	13.6	<5	<0.2	0.2	<100	<0.5	<0.5	<10	0.2	1.2	4	<2	190
CMM-14-C	32	5500	n/a	<36	1710.0	<20	<0.5	1.0	<680	<0.5	<0.5	<97	<1.5	<3.6	<91	<11	8400
CMM-14-D	30	930	n/a	<22	791.0	<11	0.5	0.7	<380	<0.5	<0.5	<54	1.4	2.2	<82	<6	340
CMM-14-E	30	310	n/a	<16	347.0	<5	1.2	1.2	<250	<0.5	<0.5	<35	1.9	1.5	<93	<2	160
CMM-14-F	32	n/a	n/a	94	19.0	<5	14.0	23.1	<100	3.1	2.5	<10	62.1	8.9	54	5	130
CMM-14-G	32	720	n/a	<5	158.0	<5	1.4	0.6	<100	<0.5	<0.5	<22	1.5	9.0	142	5	1500
CMM-14-H	32	1900	n/a	<21	850.0	<11	<0.2	0.5	<380	0.6	<0.5	<54	<0.8	<2.0	<58	13	760

Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CMM-14-I	32	n/a	n/a	<5	172.0	<5	<0.2	0.1	<100	<0.5	<0.5	<21	1.0	1.4	3	4	9900
CMM-14-J	32	n/a	n/a	<16	380.0	<5	<0.2	0.3	<260	<0.5	<0.5	<38	<0.6	1.8	<80	<4	14500
CMM-14-K	29	1940	n/a	<32	1370.0	<16	<0.5	1.3	<550	<0.5	<0.5	<78	<1.2	<2.8	<96	<9	340
CMM-14-L	32	n/a	n/a	9	3.6	<5	0.6	0.5	<100	<0.5	<0.5	<10	0.8	0.9	<1	<2	<100
CMM-14-M	27	n/a	n/a	<5	1.2	<5	0.3	0.2	<100	<0.5	<0.5	<10	0.3	0.5	<1	<2	<100
CMM-14-N	31	n/a	n/a	<5	154.0	<5	<0.2	0.1	<100	<0.5	<0.5	48	1.1	3.2	4	<2	190
CMM-14-O	31	n/a	n/a	<21	679.0	<10	<0.2	0.5	<360	<0.5	<0.5	<51	<0.8	<1.8	<54	<6	<100
CMM-14-P	31	n/a	n/a	13	3.7	<5	0.9	0.7	<100	<0.5	<0.5	<10	1.5	1.3	<1	<2	<100
CMM-14-Q	19	44	n/a	<5	54.8	<5	0.4	0.5	<100	<0.5	<0.5	<10	0.6	0.9	7	2	<100
CMM-14-R	32	n/a	n/a	26	73.6	<5	1.5	1.9	<100	<0.5	<0.5	<10	2.7	2.1	2	3	100
CMM-14-S	27	61	n/a	<5	46.5	<5	<0.2	0.1	<100	<0.5	<0.5	<10	<0.2	1.1	1	<2	160
CMM-14-T	27	96	n/a	40	46.6	<5	2.7	1.0	<100	<0.5	<0.5	<10	3.5	4.5	4	<2	780
CMM-14-U	27	650	n/a	<22	748.0	<18	<0.5	0.6	<760	<0.5	<0.5	<67	<1.3	1.9	7	<17	410
CMM-14-V	26	650	n/a	<51	2270.0	<46	<1.0	0.8	<1400	1.5	<0.5	<170	<3.2	<3.5	<41	<46	<450
CMM-14-W	26	24	<5	58	39.3	<5	3.5	3.7	<100	0.7	0.7	<10	4.0	1.2	8	4	<100
CMM-14-X	36	n/a	n/a	72	1.6	<5	31.0	75.5	<100	6.5	7.1	<10	172.0	13.0	32	7	180
CMM-14-Y	27	510	n/a	<14	519.0	<13	<0.2	0.1	<460	<0.5	<0.5	<47	<1.0	2.5	<3	<7	<100
CMM-14-Z	27	1470	n/a	<99	4270.0	<94	<1.7	0.9	<2900	<2.8	<1.8	<320	<7.0	<5.0	<36	<86	<840
CMM-15-A	32	4	n/a	30	0.9	<5	1.6	2.5	<100	<0.5	<0.5	<10	6.4	1.7	<1	<2	<100
CMM-16-27	13	>10000	n/a	<200	9770.0	<200	<3.6	2.5	<6100	<5.7	<3.6	<720	15.0	<15.0	<100	<201	2000
CMM-16-28	13	120	n/a	683	46.5	<5	0.2	<0.1	<100	<0.5	<0.5	<10	<0.2	0.6	8	<2	120
CMM-16-29	20	2300	n/a	<31	989.0	<28	1.7	0.9	<890	<0.5	<0.5	<100	2.3	3.5	<18	<14	1500
CMM-16-30	21	1640	n/a	<43	1680.0	<38	<0.8	1.3	<1200	<1.3	<0.5	<140	<2.7	6.5	<30	<25	430
CMM-16-31	21	92	n/a	<5	33.9	<5	0.6	0.7	<100	<0.5	<0.5	<10	0.9	0.7	1	<2	<100
CMM-16-32	14	5400	n/a	6	48.4	<5	<0.2	0.1	<100	<0.5	<0.5	<10	<0.2	2.4	3	<2	19000
CMM-16-33	14	n/a	n/a	10	144.0	<5	3.1	3.5	<200	0.8	<0.5	<21	10.0	4.6	7	4	550
CMM-16-34	14	n/a	n/a	38	3.6	<5	530.0	5.2	<100	1.1	0.6	<10	12.0	2.8	<1	<2	<100
CMM-16-35	16	1100	<5	<52	2280.0	<47	<1.0	0.8	<1500	<1.5	<0.5	<180	<3.3	<3.7	<41	<41	190
CMM-16-39	20	1500	n/a	<35	1140.0	<31	<0.6	0.8	<1000	<0.5	<0.5	<120	<2.2	<2.4	<15	<10	<100
CMM-16-40	15	5100	n/a	<76	3380.0	<72	<1.4	1.0	<2300	<2.3	<1.4	<270	<5.0	21.4	<44	<55	890
CMM-16-41	18	>10000	n/a	759	11500.0	<230	<4.2	<1.0	<7100	<6.7	<4.3	<840	<16.0	<17.0	1940	<202	<2000
CMM-16-41P	8	n/a	30	95	5.5	<5	16.0	40.7	<100	3.4	3.9	<10	115.0	7.1	14	3	<100
CMM-16-42	18	6950	n/a	870	5730.0	<110	<2.0	0.8	<3400	<3.2	<2.1	<400	<7.4	<8.2	267	<120	910
CMM-16-44	23	900	n/a	14	423.0	<12	0.5	1.1	<390	<0.5	<0.5	<40	3.6	3.8	<3	<11	540
CMM-16-45	19	78	n/a	12	82.1	<5	<0.2	0.1	<210	<0.5	<0.5	<10	0.4	<0.2	17	4	<100
CMM-16-46	19	1650	n/a	33	224.0	<5	<0.2	0.4	<360	0.6	<0.5	<32	1.6	4.0	7	4	3700
CMM-16-49	23	32	n/a	<5	25.3	<5	0.8	0.8	<100	<0.5	<0.5	<10	1.1	2.0	3	<2	<100
CMM-16-50	23	23	n/a	11	5.4	<5	1.3	1.0	<100	<0.5	<0.5	<10	1.7	2.8	<1	<2	<100
CMM-16-51	23	10	n/a	10	5.9	<5	1.9	1.7	<100	<0.5	<0.5	<10	2.6	2.7	3	<2	<100
CMM-16-52	20	1040	n/a	<44	1960.0	<47	<0.9	0.4	<1500	<1.3	<0.5	<160	<3.2	<2.1	<11	<39	310
CMM-16-A	7	246	<5	<5	139.0	<5	<0.2	0.1	<100	<0.5	<0.5	<10	<0.2	4.1	2	3	<100



Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CMM-16-B	7	1600	n/a	<23	555.0	<10	<0.2	0.3	<350	0.6	<0.5	<49	<0.8	12.0	<250	<6	160
CMM-16-C	7	480	n/a	<5	177.0	<5	<0.2	<0.2	<100	<0.5	<0.5	<22	<0.5	10.0	6	5	<100
CMM-16-D	17	120	n/a	10	24.9	<5	1.3	1.5	<100	<0.5	<0.5	<10	2.4	5.5	3	<2	<100
CMM-16-E	7	2400	n/a	<19	520.0	<5	<0.2	0.2	<300	<0.5	<0.5	<43	<0.7	8.8	<130	<5	910
CMM-16-F	9	1400	n/a	<5	51.3	<5	<0.2	0.2	<100	<0.5	<0.5	<10	0.5	1.7	5	<2	2500
CMM-16-G	9	1000	n/a	<12	344.0	<5	<0.2	0.3	<240	<0.5	<0.5	<33	0.9	2.1	12	8	540
CMM-16-H	8	21	n/a	<5	7.2	<5	0.2	0.3	<100	<0.5	<0.5	<10	0.6	1.2	<1	<2	<100
CMM-16-I	8	230	n/a	8	0.9	<5	0.5	1.9	<100	<0.5	<0.5	<10	1.5	1.2	<1	<2	<100
CMM-16-J	17	>10000	n/a	<21	778.0	<11	<0.2	0.2	<360	<0.5	<0.5	<52	<0.8	<1.9	<120	<10	3800
CMM-16-K	28	890	n/a	74	173.0	<5	2.1	1.5	<100	<0.5	<0.5	<22	3.7	7.1	25	3	1100
CMM-16-L	28	1300	n/a	24	422.0	<5	1.4	1.1	<290	<0.5	<0.5	<41	<0.6	7.4	<100	<8	1800
CMM-16-M	17	2800	n/a	<22	629.0	<10	<0.2	0.4	<340	<0.5	<0.5	<49	<0.8	<1.8	<170	<6	18900
CMM-16-N	17	2600	n/a	<17	399.0	<5	<0.2	0.4	<270	<0.5	<0.5	<38	<0.6	<1.4	<100	<4	2800
CMM-16-O	17	96	n/a	34	26.0	<5	0.3	0.4	<100	<0.5	<0.5	<10	0.7	0.9	6	<2	240
CMM-16-P	17	1600	n/a	1390	963.0	<12	<0.2	0.6	<440	<0.5	<0.5	<62	1.0	<2.2	224	<7	280
CMM-16-Q	20	850	n/a	<24	1150.0	<25	<0.5	1.0	<820	<0.5	<0.5	<83	<2.1	<1.1	8	<28	160
CMM-16-QP	28	n/a	n/a	71	15.8	<5	11.0	29.6	<100	2.0	2.6	<10	<95.0	8.2	32	<2	150
CMM-16-R	11	110	n/a	1060	213.0	<5	0.3	0.4	<380	<0.5	<0.5	<33	<0.7	<0.2	18	<6	560
CMM-16-S	12	3650	n/a	<160	7740.0	<160	<2.8	2.5	<4900	<4.5	<2.8	<570	14.0	<12.0	211	<130	<1300
CMM-16-T	12	5600	n/a	<110	5690.0	<110	<2.1	3.0	<3500	<3.3	<2.1	<400	<7.7	<8.2	<54	<88	760
CMM-16-U	12	3000	n/a	95	1780.0	<42	<0.8	0.4	<1400	<1.3	<0.5	<160	<3.0	4.9	<24	<32	<430
CMM-16-V	12	490	n/a	<19	636.0	<16	<0.2	0.7	<670	<0.5	<0.5	<59	<1.1	2.4	62	<17	<100
CMM-16-W	15	490	n/a	<24	721.0	<20	<0.5	0.3	<650	<0.5	<0.5	<86	<1.4	8.1	<18	<12	700
CMM-16-X	15	>10000	n/a	<60	2950.0	<56	<1.1	2.2	<1800	<1.8	<1.2	<210	<3.9	<4.3	62	<38	3200
CMM-16-Y	15	6700	n/a	79	2640.0	<53	<1.1	0.9	<1700	<1.7	<1.1	<200	<3.7	<4.0	62	<41	5900
CMM-16-Z	16	3300	n/a	<73	3470.0	<72	<1.4	<0.6	<2200	<2.2	<1.5	<260	<5.0	13.0	<53	<82	540
CMM-17-A	6	>10000	n/a	762	660.0	<5	<0.2	1.0	<340	<0.5	<0.5	<55	<0.8	2.9	4200	<6	1400
CMM-17-B	6	220	n/a	260	30.5	<5	0.2	0.3	<100	<0.5	<0.5	<10	0.4	0.6	44	<2	120
CMM-17-C	6	1000	<5	522	92.0	<5	<0.2	0.1	<100	<0.5	<0.5	<10	<0.2	1.0	44	<2	270
CMM-17-D	6	9900	n/a	360	1090.0	<14	<0.4	<0.4	<490	<0.5	<0.5	<71	<1.1	10.0	4020	<8	510
CMM-17-E	5	40	n/a	<5	4.1	<5	<0.2	<0.1	<100	<0.5	<0.5	<10	<0.2	0.3	12	<2	<100
CMM-17-F	6	2500	n/a	230	400.0	<5	<0.2	<0.4	<100	<0.5	<0.5	27	<0.2	11.0	188	4	860
CMM-17-G	4	220	n/a	697	5.0	<5	<0.2	<0.1	<100	<0.5	<0.5	<10	<0.2	0.7	11	<2	<100
CMM-17-H	6	880	n/a	879	255.0	<5	<0.2	0.2	<300	<0.5	<0.5	<31	<0.6	1.2	45	<8	520
CMM-17-I	10	n/a	n/a	48	5.4	<5	14.0	15.6	<100	2.8	1.7	<10	42.2	6.9	19	4	<100
CMM-17-J	10	n/a	n/a	89	15.7	<5	13.0	30.9	<100	2.6	3.3	<10	105.0	11.0	19	4	<100
CMM-18-A	41	n/a	n/a	220	2.8	<5	4.6	5.3	<100	0.7	0.6	<10	22.2	1.7	2	<2	<100
CMM-18-B	40	n/a	n/a	230	1.7	<5	4.4	3.9	<100	<0.5	0.7	<10	8.0	1.3	<1	<2	<100
CMM-18-C	40	n/a	n/a	160	3.3	<5	10.0	11.4	<100	1.9	1.6	<10	13.0	1.9	7	2	<100
CMM-18-D	40	n/a	<5	140	4.7	<5	22.2	6.2	<100	0.7	1.1	<10	4.1	0.8	<1	3	310
CMM-18-E	40	n/a	<5	83	11.1	<5	30.6	9.4	<100	1.3	1.8	<10	6.6	1.3	<1	5	790

Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CMM-19-A	112	n/a	<5	54	7.9	<5	2.6	2.3	<100	0.7	<0.5	<10	4.8	1.3	2	<2	<100
CMM-19-B	112	n/a	<5	<5	12.4	<5	0.3	0.4	<100	<0.5	<0.5	<10	0.9	1.6	2	<2	<100
CMM-19-C	112	n/a	<5	130	10.1	<5	2.3	2.6	<100	0.7	<0.5	<10	6.4	1.1	1	<2	<100
CMM-20-27	101	15	<5	6	0.7	<5	0.3	0.3	<100	<0.5	<0.5	<10	0.4	0.2	<1	<2	160
CMM-20-28	101	>10000	<5	<21	70.5	<20	<0.5	<0.1	<580	<0.5	<0.5	<64	<1.4	2.6	<4	<20	29500
CMM-20-29	101	50	n/a	<5	1.5	<5	<0.2	0.2	<100	<0.5	<0.5	<10	0.2	0.3	<1	<2	500
CMM-20-30	102	>10000	n/a	<20	129.0	<20	<0.4	0.4	<660	<0.5	<0.5	<60	<1.2	2.0	<3	<10	6700
CMM-20-31	102	>10000	n/a	<19	43.7	<17	<0.4	0.4	<550	<0.5	<0.5	<50	<1.0	1.5	3	<4	8300
CMM-20-32	102	16.0%	n/a	<11	128.0	<10	<0.2	0.4	<340	<0.5	<0.5	<29	<0.6	4.2	3	<5	46600
CMM-20-33	102	2800	n/a	7	5.8	6	4.2	0.6	<100	<0.5	<0.5	<10	1.2	5.5	2	<2	3200
CMM-20-34a	97	>10000	n/a	<43	160.0	<39	1.5	0.6	<1100	<0.5	<1.1	<140	<2.7	3.2	<22	<28	26900
CMM-20-34b	97	6900	n/a	210	17.5	<14	10.0	4.8	<450	<0.5	<0.5	<41	2.5	3.4	7	10	25800
CMM-20-35	96	57	n/a	27	3.2	<5	1.6	0.9	<100	<0.5	<0.5	<10	2.0	0.5	1	<2	110
CMM-20-36	99	15	n/a	190	0.5	<5	4.0	5.5	<100	0.9	0.9	<10	21.6	1.9	5	2	<100
CMM-20-37	96	800	n/a	9	2.0	<5	<0.2	0.2	<100	<0.5	<0.5	<10	0.4	<0.2	<1	<2	310
CMM-20-38	96	93	n/a	150	0.9	<5	19.0	4.5	<100	<0.5	0.7	<10	3.9	1.3	2	3	190
CMM-20-40	104	6900	n/a	<110	5490.0	<110	<2.0	<0.9	<3400	<3.2	<2.0	<400	<7.7	21.0	<51	<100	4300
CMM-20-41	104	5800	n/a	470	83.9	<5	<0.2	<0.2	<270	<0.5	<0.5	<41	<0.5	8.6	154	<2	6100
CMM-20-42	104	8300	n/a	33	6.4	<5	1.7	0.8	<100	<0.5	<0.5	<10	1.2	1.1	8	<2	2800
CMM-20-43	95	>10000	n/a	<42	199.0	<39	<1.0	<0.4	<1100	<0.5	<1.1	<140	2.7	10.0	<22	<41	30600
CMM-20-44	95	29	n/a	5	1.2	<5	0.4	0.4	<100	<0.5	<0.5	<10	0.6	0.4	<1	<2	<100
CMM-20-45	94	>10000	n/a	<37	280.0	<35	<0.8	0.5	<1000	<0.5	<0.5	<130	<2.4	<2.7	<19	<25	7000
CMM-20-46	94	8	n/a	5	0.6	<5	0.4	0.3	<100	<0.5	<0.5	<10	0.6	0.5	1	<2	<100
CMM-20-47	95	>10000	n/a	<22	131.0	<22	<0.5	0.1	<650	<0.5	<0.5	<72	<1.5	1.9	8	<23	3400
CMM-20-48	95	>10000	n/a	<37	372.0	<36	<1.0	<0.4	<1000	<0.5	<1.0	<130	2.7	16.0	21	<25	50400
CMM-20-49	95	>10000	n/a	<32	249.0	<28	<0.7	<0.3	<830	<0.5	<0.5	<110	<2.0	5.6	<16	<19	11300
CMM-20-50	95	>10000	n/a	<33	118.0	<30	1.4	<0.3	<840	<0.5	<0.5	<110	<2.1	8.5	<19	<26	39700
CMM-20-51	101	32	<5	230	1.3	<5	4.7	6.4	<100	1.5	0.9	<10	22.1	2.1	<1	3	<100
CMM-20-52	99	>10000	n/a	<23	111.0	<23	<0.6	0.3	<670	<0.5	<0.5	<75	<1.6	4.6	<4	<33	24200
CMM-20-53	98	>10000	n/a	<31	87.7	<28	<0.7	0.6	<800	<0.5	<0.5	<100	<1.9	<1.9	33	<20	14600
CMM-20-54	98	122	<5	210	3.5	<5	4.0	6.1	<100	1.2	0.7	<10	19.0	2.1	3	3	190
CMM-20-55	98	2250	n/a	11	2.0	<5	<0.2	0.2	<100	<0.5	<0.5	<23	<0.4	1.2	1170	<2	1400
CMM-20-56	98	3500	n/a	<5	1.8	<5	<0.2	0.1	<100	<0.5	<0.5	<10	0.4	1.3	<1	<2	12900
CMM-20-57	98	5.55%	n/a	<26	53.6	<22	<0.7	<0.4	<620	<0.5	<0.5	<80	<1.5	15.0	<23	<6	30600
CMM-20-58	98	12	n/a	<5	0.8	<5	<0.2	0.1	<100	<0.5	<0.5	<10	0.2	0.3	<1	<2	<100
CMM-20-60	104	4200	<5	<44	1680.0	<40	<1.0	1.1	<1300	<1.3	<1.0	<150	<2.8	<3.0	<26	<30	53700
CMM-20-A	105	2900	n/a	130	83.1	<5	3.4	3.7	<250	<0.5	<0.5	<21	10.0	3.3	10	4	2800
CMM-20-B	105	>10000	<5	170	4460.0	<88	2.7	1.5	<2800	<2.7	<1.7	<330	10.0	<6.8	<43	<76	690
CMM-20-C	107	n/a	n/a	44	5.3	<5	40.0	27.9	<100	3.5	3.1	<10	116.0	4.9	4	4	160
CMM-20-D	101	780	n/a	15	345.0	<16	0.4	0.7	<550	<0.5	<0.5	<46	1.7	0.8	53	<13	280
CMM-20-E	107	100	<5	120	1.8	<5	4.5	2.9	<100	0.7	0.5	<10	6.7	23.7	5	<2	<100

Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CMM-20-F	107	>10000	n/a	<110	4970.0	<120	<2.1	<0.6	<3600	<3.2	<2.1	<410	<7.9	8.0	<38	<110	9700
CMM-20-G	107	5600	n/a	<16	614.0	<15	<0.2	0.5	<530	0.7	<0.5	<54	<1.1	2.6	<3	<11	6200
CMM-20-H	108	>10000	n/a	<20	334.0	<16	0.7	0.2	<490	<0.5	<0.5	<61	<1.1	6.8	14	<5	2600
CMM-20-I	109	720	n/a	<12	42.7	<5	0.8	<0.4	<270	<0.5	<0.5	<23	<0.5	13.0	22	<2	200
CMM-20-J	108	>10000	n/a	16	205.0	12	1.9	1.9	<320	<0.5	<0.5	<33	4.2	11.0	50	<5	7900
CMM-20-K	108	>10000	n/a	<13	195.0	<5	1.3	0.2	<310	<0.5	<0.5	<32	1.2	48.7	<3	<6	33500
CMM-20-L	108	16	n/a	19	11.3	<5	1.3	0.9	<100	<0.5	<0.5	<10	2.3	2.6	3	<2	750
CMM-20-M	108	38	n/a	<23	515.0	59	<0.6	<1.1	<570	<0.5	<0.5	<300	<1.3	41.0	175	<6	44400
CMM-20-N	101	>10000	<5	<13	47.6	<10	0.6	0.9	<310	<0.5	<0.5	<33	<0.7	2.1	<2	<7	18600
CMM-20-O	106	6600	n/a	<24	1530.0	<27	<0.5	1.0	<840	<0.5	<0.5	<87	<1.8	<1.2	<5	<34	10600
CMM-20-P	106	230	n/a	190	11.3	<5	3.1	6.4	<100	1.0	0.8	<10	16.0	2.1	3	3	590
CMM-20-Q	106	5650	n/a	250	41.4	<5	29.2	5.2	<100	0.7	1.2	<10	4.9	3.8	5	3	3700
CMM-20-R	106	>10000	n/a	<65	2870.0	<63	<1.4	0.5	<2000	<1.9	<1.4	<230	<4.4	7.4	<26	<53	50100
CMM-20-S	106	3	n/a	76	11.8	<5	0.7	0.5	<100	<0.5	<0.5	<10	2.9	18.0	3	<2	820
CMM-20-T	106	>10000	n/a	44	40.6	<5	0.3	1.0	<100	<0.5	0.7	<10	2.1	10.0	5	2	2200
CMM-20-U	106	>10000	<5	<81	3940.0	<78	<1.5	<0.6	<2500	<2.4	<1.5	<290	<5.5	11.0	<41	<77	13300
CMM-20-V	103	>10000	n/a	<72	3310.0	<70	<1.4	<0.7	<2200	2.4	<1.4	<260	<4.9	18.0	<42	<38	13900
CMM-20-W	103	2400	n/a	150	418.0	<18	15.0	3.3	<630	<0.5	<0.5	<53	4.2	2.3	11	12	2300
CMM-20-X	103	6700	n/a	<120	5530.0	<120	<2.2	1.2	<3700	4.4	<2.2	<440	10.0	<9.4	178	<110	1600
CMM-20-Y	109	n/a	n/a	21	8.2	<5	12.0	16.6	<100	4.0	2.1	<10	50.8	10.0	6	6	<100
CMM-20-Z	101	>10000	n/a	<17	49.8	<16	0.9	1.3	<450	<0.5	<0.5	<50	2.7	<0.7	5	<11	34600
CMM-21-A	41	n/a	n/a	130	0.3	<5	54.5	27.6	<100	1.7	4.2	<10	58.1	10.0	6	16	<100
CMM-21-B	41	n/a	n/a	200	0.2	<5	3.1	1.9	<100	<0.5	<0.5	<10	5.1	1.1	<1	<2	<100
CMM-21-C	41	n/a	<5	160	0.2	<5	3.9	0.9	<100	<0.5	<0.5	<10	4.2	1.0	1	<2	<100
CMM-21-D	41	n/a	n/a	200	2.7	<5	11.0	2.9	<100	1.3	<0.5	<10	25.2	4.1	2	<2	<100
CMM-22-A	1	n/a	<5	94	0.4	<5	1.0	1.2	<100	<0.5	<0.5	<10	2.9	0.8	<1	<2	<100
CMM-22-B	1	n/a	n/a	81	4.3	<5	25.4	30.8	<100	8.5	4.6	<10	77.0	13.0	4	15	110
CMM-23-A	68	11	n/a	110	0.8	<5	8.3	5.7	<100	1.3	1.0	<10	11.0	2.6	<1	2	<100
CMM-23-B	68	<1	n/a	57	0.2	<5	46.0	7.6	<100	1.6	1.8	<10	2.9	1.3	<1	5	180
CMM-23-C	66	970	n/a	39	673.0	<18	<0.4	2.8	<600	<0.5	<0.5	<62	2.5	<0.8	<5	<17	370
CMM-23-D	66	880	n/a	66	126.0	<5	0.8	7.1	<220	<0.5	<0.5	<23	20.1	1.9	<1	3	<100
CMM-23-E	66	2350	n/a	48	248.0	<5	5.8	1.4	<300	<0.5	<0.5	<31	<0.8	0.9	16	<6	3400
CMM-23-F	64	19	n/a	170	1.1	<5	0.5	0.7	<100	<0.5	<0.5	<10	1.3	1.5	1	<2	<100
CMM-23-G	68	n/a	n/a	110	115.0	<5	60.5	60.0	<250	2.1	7.7	<26	176.0	14.0	66	18	230
CMM-23-I	66	8	n/a	210	3.4	<5	5.8	6.4	<100	1.1	0.7	<10	18.0	2.0	3	<2	<100
CMM-23-J	66	820	<5	93	2800.0	<72	1.9	7.3	<2200	<1.9	1.7	<230	13.0	<3.3	<13	<74	<780
CMM-23-K	66	35	n/a	190	13.5	<5	11.0	13.4	<100	1.3	1.7	<10	32.7	3.1	2	4	<100
CMM-23-L	66	>10000	<5	<20	792.0	<20	0.5	0.9	<630	<0.5	<0.5	<66	<1.3	<0.9	15	<20	<230
CMM-23-M	66	350	n/a	63	157.0	<10	4.8	1.8	<280	0.6	<0.5	<29	2.6	<0.5	6	<2	<100
CMM-23-N	64	70	n/a	150	3.2	<5	8.0	4.0	<100	3.4	0.6	<10	6.2	3.7	321	<2	<100
CMM-23-O	64	860	n/a	49	85.9	<5	24.0	1.9	<210	<0.5	<0.5	<22	2.5	4.9	4	4	1600

Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CMM-25-Ap	80	n/a	n/a	24	1.5	<5	6.9	7.4	<100	1.9	1.3	<10	20.4	4.2	8	3	110
CMM-25-Bp	80	n/a	n/a	24	1.7	<5	2.5	2.0	<100	<0.5	<0.5	<10	4.2	1.3	<1	<2	<100
CRM-01	269	4550	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	58
CRM-02	269	3150	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	65
CRM-05	412	n/a	n/a	10	1.3	<5	<0.2	0.1	<100	<0.5	<0.5	<10	1.3	1.9	<1	<2	<100
CRM-06	404	n/a	n/a	230	1.2	<5	2.1	2.0	<100	1.3	<0.5	<10	15.0	2.3	<1	<2	<100
CRM-07	406	n/a	n/a	22	0.3	<5	0.3	0.2	<100	<0.5	<0.5	<10	1.5	4.9	2	<2	<100
CRM-08	405	410	n/a	55	0.7	<5	0.6	0.4	<100	<0.5	<0.5	<10	5.9	3.4	20	<2	310
CRM-10	265	n/a	n/a	<5	0.1	<5	1.9	2.6	<100	<0.5	<0.5	<10	4.6	7.4	5	<2	230
CRM-12	255	n/a	n/a	41	0.3	<5	34.3	5.1	<100	<0.5	0.8	<10	0.9	0.7	2	3	110
CRM-13	273	n/a	n/a	49	0.2	<5	7.3	3.1	<100	<0.5	0.5	<10	7.0	1.2	4	3	<100
CRM-14	409	n/a	n/a	120	0.5	<5	1.1	1.0	<100	0.6	<0.5	<10	8.7	1.9	<1	<2	<100
CRM-15	411	n/a	n/a	91	30.5	<5	0.4	0.2	<100	<0.5	<0.5	<10	5.2	8.8	<1	<2	400
CRM-16	411	n/a	n/a	38	15.9	<5	0.2	0.1	<100	<0.5	<0.5	<10	5.6	5.1	<1	<2	220
CRM-17	411	n/a	n/a	270	7.1	<5	1.8	3.5	<100	1.3	<0.5	<10	14.0	2.8	10	<2	<100
CRM-18	410	n/a	n/a	120	0.3	<5	2.1	3.7	<100	0.9	<0.5	<10	17.0	5.4	2	<2	110
CRM-19	412	n/a	n/a	<5	2.9	<5	<0.2	<0.1	<100	<0.5	<0.5	<10	0.3	4.0	<1	<2	<100
CRM-20	407	n/a	n/a	160	15.2	<5	3.0	3.1	<100	0.6	<0.5	<10	10.0	2.4	3	<2	<100
CRM-21	273	>10000	n/a	<5	2.2	7	1.0	0.1	<100	<0.5	<0.5	34	<0.2	4.5	11	<2	<100
CRM-22	274	n/a	n/a	44	2.7	<5	23.3	5.5	<100	0.5	1.5	<10	10.0	2.2	<1	9	150
CRM-24	284	n/a	n/a	410	3.8	<5	3.6	1.8	<100	1.5	<0.5	<10	6.7	2.1	5	<2	630
CRM-25	285	n/a	n/a	290	6.2	<5	2.1	1.4	<100	0.8	<0.5	<10	3.3	1.1	5	<2	<100
CRM-26	281	n/a	n/a	130	2.0	<5	2.8	4.9	<100	1.3	0.7	<10	15.0	4.8	14	<2	<100
CRM-27	272	n/a	n/a	10	20.1	<5	1.3	0.3	<100	<0.5	<0.5	34	<0.2	0.7	185	<2	<100
CRM-28	281	n/a	n/a	220	1.2	<5	4.8	14.7	<100	3.2	1.9	<10	37.8	7.7	7	4	<100
CRM-29	282	1900	n/a	60	20.6	<5	0.4	0.4	<100	<0.5	<0.5	<10	1.3	2.6	8	<2	<100
CRM-30	282	>10000	n/a	<320	17400.0	<460	<6.9	<0.9	<14000	<10.0	<7.1	<1400	<31.0	<17.0	<39	<517	690
CRM-31	303	n/a	n/a	330	94.1	<5	4.2	4.7	<100	1.1	0.7	<10	6.2	3.6	32	5	<100
CRM-32	286	n/a	n/a	490	11.5	<5	7.0	2.9	<100	1.4	0.6	<10	7.2	4.5	11	2	<100
CRM-33	306	n/a	n/a	78	1.4	<5	2.0	5.2	<100	4.3	1.3	<10	40.4	2.5	7	3	<100
CRM-35	270	n/a	n/a	15	8.3	<5	<0.2	0.2	<100	<0.5	<0.5	<10	0.4	0.4	1	<2	<100
CRM-36	268	n/a	n/a	13	7.2	<5	0.5	0.7	<100	<0.5	<0.5	<10	0.3	16.0	2	<2	<100
CRM-38	417	210	n/a	12	7.3	<5	0.8	1.3	<100	<0.5	<0.5	<10	2.6	1.6	3	<2	<100
CRM-39	297	7	n/a	150	1.3	<5	7.1	4.4	<100	0.9	0.7	<10	10.0	3.8	2	<2	<100
CRM-40	267	n/a	n/a	140	1.3	<5	1.1	2.9	<100	<0.5	<0.5	<10	14.0	0.4	<1	<2	<100
CRM-41	302	35	n/a	85	0.9	<5	1.7	0.9	<100	<0.5	<0.5	<10	2.8	3.1	4	<2	<100
CRM-42	292	420	n/a	120	0.8	<5	1.0	1.2	<100	<0.5	<0.5	<10	2.3	3.4	1410	<2	8900
CRM-43	294	470	n/a	48	2.3	<5	1.1	1.6	<100	<0.5	<0.5	<10	2.0	0.8	37	<2	14000
CRM-44	293	36	n/a	310	1.5	<5	2.3	1.2	<100	0.9	<0.5	<10	9.4	7.9	7	<2	2200

(p indicates placer sample)



Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CRM-45	305	n/a	n/a	<5	0.9	<5	0.6	0.6	<100	<0.5	<0.5	<10	0.6	0.7	4	<2	<100
CRM-51	291	860	n/a	250	15.4	<5	2.0	4.6	<100	0.9	<0.5	<10	10.0	3.2	36	<2	770
CRM-52	290	22	n/a	220	0.6	<5	1.8	2.6	<100	<0.5	0.5	<10	7.0	11.0	8	<2	<100
CRM-53	290	n/a	n/a	52	3.2	<5	0.4	0.6	<100	<0.5	<0.5	<10	2.4	6.8	5	<2	<100
CRM-54	416	n/a	n/a	34	1.3	<5	0.5	0.2	<100	<0.5	<0.5	<10	0.5	0.2	2	<2	<100
CRM-55	290	5	n/a	110	0.7	<5	1.0	1.7	<100	<0.5	<0.5	<10	5.1	1.9	3	<2	<100
CRM-56	415	26	n/a	42	0.9	<5	2.3	2.1	<100	0.7	<0.5	<10	12.0	9.3	74	3	140
CRM-57	304	7	n/a	59	0.9	<5	0.6	0.3	<100	<0.5	<0.5	<10	0.5	3.9	21	<2	<100
CRM-58	296	5400	n/a	250	8.4	<5	1.2	3.7	<100	<0.5	<0.5	<20	1.1	3.9	994	<2	14200
CRM-59	295	n/a	n/a	64	1.3	<5	0.3	0.3	<100	<0.5	<0.5	<10	1.5	5.0	31	<2	2100
CRM-60	296	n/a	n/a	68	1.4	<5	0.7	0.4	<100	<0.5	<0.5	<10	1.3	0.4	4	<2	110
CRM-61	304	28	n/a	45	0.2	<5	3.0	3.8	<100	1.5	0.6	<10	14.0	13.0	3	<2	270
CRM-62	304	20	n/a	33	0.1	<5	1.3	0.8	<100	<0.5	<0.5	<10	1.7	9.2	2	<2	<100
CRM-63	271	51	n/a	240	0.2	<5	0.9	1.2	<100	<0.5	<0.5	<10	<0.4	5.4	1480	<2	560
CRM-64	413	1	n/a	8	0.2	<5	0.3	0.2	<100	<0.5	<0.5	<10	<0.2	0.8	10	<2	<100
CRM-65	414	5	n/a	28	0.2	<5	3.4	2.2	<100	0.9	<0.5	<10	7.6	11.0	329	<2	22800
CRM-66	289	>10000	n/a	8	0.3	<5	<0.2	1.1	<100	<0.5	<0.5	<10	3.0	4.4	930	<2	38300
CRM-67	287	70	n/a	280	0.3	<5	2.2	2.7	<100	1.0	<0.5	<10	8.9	2.4	41	<2	350
CRM-68	287	325	n/a	350	32.9	<5	2.1	3.3	<100	0.9	<0.5	<10	8.5	1.2	22	<2	1500
CRM-69	287	920	n/a	76	136.0	<5	0.2	0.5	<240	<0.5	<0.5	<25	1.1	<0.2	6	<5	890
CRM-70	275	216	n/a	92	83.5	<5	1.1	2.5	<100	<0.5	<0.5	<10	3.1	1.3	3	2	<100
CRM-71	276	14	n/a	140	8.3	<5	1.3	2.0	<100	0.8	<0.5	<10	5.8	1.7	2	<2	<100
CRM-72	277	6400	n/a	52	84.4	<5	<0.2	0.4	<210	<0.5	<0.5	<21	1.0	10.0	<3	<2	580
CRM-73	277	145	n/a	110	45.6	<5	0.7	0.9	<100	<0.5	<0.5	<10	4.1	3.3	3	<2	220
CRM-74	278	n/a	n/a	190	0.7	<5	2.5	3.9	<100	1.0	<0.5	<10	11.0	3.1	<1	<2	<100
CRM-75	408	960	n/a	220	2.0	<5	8.1	3.3	<100	<0.5	0.6	<10	5.4	5.9	5	<2	1200
CRR-001	359	n/a	n/a	13	248.0	<5	<0.2	<0.1	<210	<0.5	<0.5	<29	1.2	4.9	<3	<2	28100
CRR-002	336	n/a	n/a	200	1.6	<5	3.0	3.8	<100	0.9	<0.5	<10	23.6	4.0	2	<2	<100
CRR-003	337	n/a	n/a	170	1.0	<5	4.1	4.2	<100	1.1	<0.5	<10	23.0	3.7	2	<2	<100
CRR-004	338	n/a	n/a	26	2.4	17	2.0	<1.3	<100	<0.5	<0.5	<10	8.4	56.4	10	2	270
CRR-005	338	n/a	n/a	13	5.9	<5	6.1	5.0	<100	0.8	0.7	<10	16.0	26.9	16	3	<100
CRR-006	338	n/a	n/a	23	3.9	<5	5.1	4.6	<100	0.7	<0.5	<10	6.5	13.0	4	<2	130
CRR-008	339	2	n/a	15	3.5	<5	3.2	3.4	<100	0.5	<0.5	<10	4.9	44.9	16	<2	200
CRR-009	339	1	n/a	61	9.0	<5	5.4	18.2	<100	1.7	3.4	<10	20.0	7.4	37	10	650
CRR-010	339	2600	n/a	120	1.8	<5	8.4	4.7	<100	1.2	0.8	<10	10.0	8.4	4	3	320
CRR-011	342	n/a	n/a	32	2.6	<5	1.9	3.3	<100	<0.5	0.7	<10	1.9	2.8	6	2	<100
CRR-012	342	n/a	n/a	25	3.2	<5	1.2	4.6	<100	<0.5	0.7	<10	1.1	3.0	1	2	<100
CRR-013	342	n/a	n/a	93	2.4	<5	4.6	3.7	<100	<0.5	0.7	<10	5.5	5.6	4	3	<100
CRR-014	342	n/a	n/a	54	1.5	<5	5.8	4.2	<100	<0.5	0.7	<10	4.5	3.8	6	2	<100
CRR-016	343	n/a	n/a	<12	10.0	<5	0.6	<0.4	<100	<0.5	<0.5	<10	<0.2	18.0	129	<2	20100
CRR-017	343	n/a	n/a	<12	3.4	9	0.7	0.2	<100	<0.5	<0.5	<10	1.4	6.1	2	<2	360

Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CRR-018	343	n/a	n/a	<13	3.1	11	0.6	3.9	<100	0.6	0.7	<10	1.0	13.0	10	2	240
CRR-019	344	n/a	n/a	160	4.2	<5	1.2	1.7	<100	0.7	<0.5	<10	31.8	15.0	9	<2	<100
CRR-020	344	n/a	n/a	100	1.1	<5	2.4	5.2	<100	0.9	0.7	<10	13.0	2.9	3	<2	<100
CRR-021	344	n/a	n/a	<5	1.2	<5	1.1	0.6	<100	<0.5	<0.5	<10	0.8	2.8	2	<2	<100
CRR-022	344	n/a	n/a	170	4.1	<5	3.3	2.3	<100	0.9	<0.5	<10	33.2	16.0	20	<2	<100
CRR-023	344	>10000	n/a	<5	6.5	<5	<0.2	<0.1	<100	<0.5	<0.5	<74	<0.2	8.9	297	<2	3900
CRR-024	345	n/a	n/a	200	1.6	<5	4.9	5.8	<100	1.8	0.7	<10	25.0	3.5	1	3	<100
CRR-025	334	n/a	n/a	120	1.5	<5	19.0	4.5	<240	0.7	<0.5	<32	12.0	7.1	2410	<2	<100
CRR-026	334	n/a	n/a	<5	94.7	<5	<0.2	0.2	<100	<0.5	<0.5	<21	<0.4	3.9	16	<4	5700
CRR-027	368	n/a	n/a	85	5.2	<5	23.7	2.5	<100	0.7	<0.5	<10	2.3	7.0	5	<2	1900
CRR-028	368	n/a	n/a	130	3.0	<5	14.0	4.8	<100	<0.5	1.1	110	12.0	4.5	899	6	<100
CRR-029	368	n/a	n/a	170	0.8	<5	11.0	4.3	<100	0.7	0.7	36	10.0	2.5	147	2	<100
CRR-030	368	n/a	n/a	62	2.0	<5	6.9	8.4	<100	<0.5	1.2	<10	8.1	7.5	370	3	<100
CRR-031	368	8	n/a	170	0.5	<5	14.0	6.6	<100	0.6	1.0	<10	13.0	3.0	57	2	<100
CRR-032	370	>10000	n/a	<5	6.0	<5	<0.2	<0.4	<100	<0.5	<0.5	<10	0.6	19.0	4	<2	43900
CRR-033	370	>10000	n/a	52	8.4	<5	3.9	0.5	<100	<0.5	<0.5	<10	1.4	14.0	1	<2	<100
CRR-034	369	n/a	n/a	<5	1.4	<5	0.7	0.3	<100	<0.5	<0.5	<10	0.6	0.5	3	<2	<100
CRR-035	369	n/a	n/a	<5	4.1	<5	0.9	2.9	<100	<0.5	<0.5	<10	0.8	3.1	21	<2	<100
CRR-036	369	n/a	n/a	<5	1.4	<5	1.0	0.6	<100	<0.5	<0.5	<10	<0.2	0.8	4	<2	<100
CRR-037	366	n/a	n/a	240	0.9	<5	13.0	2.0	<100	<0.5	<0.5	<10	1.5	2.1	5	<2	<100
CRR-038	367	n/a	n/a	150	0.2	<5	4.7	4.1	<100	0.9	0.6	<10	18.0	2.8	1	<2	<100
CRR-039	367	n/a	n/a	150	0.6	<5	5.9	4.2	<100	<0.5	0.7	<10	8.5	6.2	4	<2	<100
CRR-040	366	n/a	n/a	180	0.9	<5	7.8	4.1	<100	0.8	0.7	<10	12.0	4.3	7	<2	<100
CRR-041	364	n/a	n/a	<5	3.7	<5	2.2	<0.5	<100	1.4	<0.5	<23	13.0	16.0	11	<2	260
CRR-042	362	2800	n/a	<5	2.4	<5	0.4	0.4	<140	<0.5	<0.5	<10	0.6	1.9	<1	<2	1200
CRR-043	362	>10000	n/a	<5	44.7	<5	<0.2	<0.1	<270	<0.5	<0.5	<21	<0.5	8.6	<1	<2	2900
CRR-044	362	n/a	n/a	91	3.2	<5	6.9	4.2	<100	1.2	0.9	<10	24.7	8.4	9	3	<100
CRR-045	362	n/a	n/a	<5	44.0	<5	0.8	0.3	<100	<0.5	<0.5	<23	1.2	5.6	<1	<2	97800
CRR-046	362	n/a	n/a	<10	2.8	<5	0.9	0.5	<100	<0.5	<0.5	<10	<0.5	4.2	<1	<2	26000
CRR-047	362	n/a	n/a	200	2.1	<5	38.8	0.4	<100	<0.5	<0.5	<10	18.0	5.5	6	<2	<100
CRR-048	362	n/a	n/a	<17	127.0	<14	<0.4	0.2	<430	<0.5	<0.5	<45	<1.0	18.0	3	<7	840
CRR-049	363	n/a	n/a	<19	550.0	<18	<0.4	0.4	<590	<0.5	<0.5	<59	<1.2	8.8	719	<14	3500
CRR-050	363	n/a	n/a	30	0.5	<5	2.8	1.5	<100	<0.5	<0.5	<10	4.9	17.0	1	<2	<100
CRR-051	358	n/a	n/a	100	0.3	<5	7.8	19.9	<100	0.9	2.4	<10	189.0	5.3	<1	<2	<100
CRR-052	358	n/a	n/a	6	0.4	<5	0.5	2.6	<100	<0.5	<0.5	<10	17.0	0.4	<1	<2	<100
CRR-053	358	n/a	n/a	85	0.7	<5	1.1	2.2	<100	<0.5	<0.5	<10	6.9	3.3	5	<2	<100
CRR-054	358	n/a	n/a	32	0.3	<5	0.5	0.9	<100	<0.5	<0.5	<10	4.6	11.0	3	<2	<100
CRR-055	352	n/a	n/a	18	0.2	<5	0.9	1.3	<100	<0.5	<0.5	<10	4.7	1.4	2	<2	<100
CRR-056	346	n/a	n/a	91	0.5	<5	2.9	47.8	<100	<0.5	4.2	<10	401.0	13.0	5	<2	<100
CRR-057	350	n/a	n/a	220	1.3	<5	20.0	11.3	<100	<0.5	1.4	<10	8.2	16.0	8	3	140
CRR-058	350	n/a	n/a	130	0.7	<5	15.0	9.4	<100	0.5	1.4	<10	7.4	9.5	4	2	110

Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CRR-059	350	n/a	n/a	20	0.3	<5	1.0	0.7	<100	<0.5	<0.5	<10	6.9	0.8	<1	<2	<100
CRR-060	349	n/a	n/a	250	0.4	<5	6.0	12.5	<100	1.0	1.2	<10	328.0	7.7	2	<2	<100
CRR-061	349	n/a	n/a	11	0.2	<5	0.6	0.4	<100	<0.5	<0.5	<10	2.7	0.8	<1	<2	<100
CRR-062	349	n/a	n/a	160	1.0	<5	13.0	3.8	<100	1.2	0.8	<10	36.3	4.8	<1	<2	<100
CRR-063	349	n/a	n/a	14	1.0	6	1.7	0.8	<100	<0.5	<0.5	<10	1.8	14.0	4	<2	410
CRR-064	349	n/a	n/a	15	0.1	<5	0.5	0.7	<100	<0.5	<0.5	<10	1.3	0.8	3	<2	<100
CRR-065	350	n/a	n/a	130	0.4	<5	15.0	0.6	<100	2.0	<0.5	<10	8.5	5.3	<1	<2	<100
CRR-066	353	n/a	n/a	140	0.5	<5	19.0	8.7	<100	1.2	0.9	<10	10.0	2.3	2	<2	150
CRR-067	353	n/a	n/a	30	0.5	<5	1.5	1.1	<100	<0.5	<0.5	32	6.0	1.7	4	<2	<100
CRR-068	353	n/a	n/a	15	1.6	6	1.6	1.2	<100	<0.5	<0.5	<10	2.4	11.0	10	<2	430
CRR-069	353	n/a	n/a	8	0.3	<5	0.8	0.4	<100	<0.5	<0.5	<10	1.6	3.0	2	<2	<100
CRR-070	353	n/a	n/a	10	0.3	<5	1.0	0.5	<100	<0.5	<0.5	<10	3.4	1.0	5	<2	<100
CRR-071	358	n/a	n/a	480	0.8	<27	14.0	292.0	<540	2.8	23.0	<71	3210.0	43.7	<5	<7	<510
CRR-072	351	n/a	n/a	89	0.3	<5	1.7	2.8	<100	<0.5	<0.5	<10	20.0	3.5	3	<2	<100
CRR-073	351	n/a	n/a	200	0.1	<5	6.6	18.8	<100	1.1	2.1	<10	87.5	4.4	1	<2	<100
CRR-074	351	n/a	n/a	81	0.4	<5	2.1	2.6	<100	<0.5	<0.5	<10	32.8	2.2	7	<2	<100
CRR-075	348	n/a	n/a	150	0.7	<5	10.0	7.1	<100	1.0	0.7	<10	20.0	4.7	10	<2	<100
CRR-076	353	n/a	n/a	72	0.2	<5	2.2	1.7	<100	<0.5	<0.5	<10	5.6	2.7	4	<2	<100
CRR-077	353	n/a	n/a	61	0.1	<5	1.0	2.0	<100	<0.5	<0.5	<10	8.4	1.2	3	<2	<100
CRR-078	353	n/a	n/a	110	0.2	<5	1.9	3.3	<100	<0.5	<0.5	<10	10.0	1.2	2	<2	<100
CRR-079	348	n/a	n/a	48	0.2	<5	1.0	2.2	<100	<0.5	<0.5	<10	6.9	2.6	1	<2	<100
CRR-080	348	n/a	n/a	43	0.1	<5	0.5	1.4	<100	<0.5	<0.5	<10	3.4	1.0	3	<2	<100
CRR-081	348	n/a	n/a	110	0.2	<5	1.2	2.6	<100	<0.5	<0.5	<10	8.0	1.2	4	<2	<100
CRR-082	353	n/a	n/a	54	<0.1	<5	1.0	1.4	<100	<0.5	<0.5	<10	10.0	1.1	3	<2	<100
CRR-083	357	n/a	n/a	<5	0.7	<5	2.4	1.2	<100	<0.5	0.6	<10	6.6	4.5	31	5	<100
CRR-084	356	n/a	n/a	8	3.4	<5	1.5	0.8	<100	<0.5	<0.5	<10	2.7	2.1	6	<2	<100
CRR-085	356	n/a	n/a	32	3.3	<5	4.5	1.3	<100	<0.5	<0.5	<10	1.1	11.0	12	<2	<100
CRR-086	356	n/a	n/a	8	0.5	<5	0.3	0.6	<100	<0.5	<0.5	<10	2.6	0.7	<1	<2	<100
CRR-087	356	n/a	<5	8	0.6	<5	0.3	0.3	<100	<0.5	<0.5	<10	1.0	0.6	1	<2	<100
CRR-088	347	n/a	n/a	200	0.4	<5	11.0	5.6	<100	1.8	0.6	<10	15.0	4.4	3	<2	<100
CRR-089	347	n/a	n/a	<5	<0.1	<5	1.4	2.3	<100	<0.5	<0.5	<10	0.7	2.6	28	<2	<100
CRR-090	347	n/a	n/a	40	0.3	<5	1.9	3.1	<100	<0.5	0.5	<10	5.3	15.0	22	<2	<100
CRR-091	354	n/a	n/a	12	0.2	<5	1.3	0.7	<100	<0.5	<0.5	<10	3.4	1.1	3	<2	<100
CRR-092	354	n/a	n/a	77	0.9	<5	17.0	5.7	<100	0.8	<0.5	<10	6.9	28.9	6	<2	<100
CRR-093	354	n/a	n/a	31	0.1	<5	0.8	0.2	<100	<0.5	<0.5	<10	1.0	0.6	<1	<2	<100
CRR-094	354	n/a	n/a	<5	0.2	<5	0.4	0.2	<100	<0.5	<0.5	<10	<0.2	0.8	1	<2	<100
CRR-095	360	n/a	n/a	9	0.4	<5	18.0	5.8	<100	1.0	1.7	<10	8.4	10.0	22	11	280
CRR-096	360	n/a	n/a	<5	0.2	<5	4.3	1.1	<100	<0.5	<0.5	<10	0.3	0.6	4	<2	230
CRR-097	333	n/a	n/a	23	1.7	<5	1.5	1.5	<100	<0.5	<0.5	<10	18.0	1.6	3	<2	<100
CRR-098	353	n/a	n/a	28	0.2	<5	0.8	0.9	<100	<0.5	<0.5	<10	1.1	5.2	2	<2	<100
CRR-099	365	n/a	n/a	61	1.6	<5	14.0	1.5	<100	<0.5	<0.5	<10	2.7	3.9	159	<2	<100

Table A-28 Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CRR-100	365	n/a	n/a	8	0.9	<5	0.6	0.5	<100	<0.5	<0.5	<10	1.1	3.0	13	<2	<100
CRR-101	355	n/a	n/a	<5	0.3	<5	5.7	0.4	<100	<0.5	<0.5	<10	1.5	0.3	21	<2	<100
CRR-102	365	n/a	n/a	<5	1.0	<5	<0.2	0.2	<100	<0.5	<0.5	<10	1.1	0.2	<1	<0	<100
CRR-103	365	n/a	n/a	18	0.7	<5	5.8	1.8	<100	<0.5	<0.5	<10	5.8	6.6	41	<2	<100
CRR-104	365	n/a	n/a	6	1.2	<5	0.3	1.1	<100	<0.5	<0.5	<10	1.6	0.8	4	<2	<100
CRR-105	365	n/a	n/a	9	0.3	<5	0.5	0.1	<100	<0.5	<0.5	<10	0.5	1.0	4	<2	<100
CRR-106	365	n/a	n/a	150	0.6	<5	16.0	5.9	<100	<0.5	0.6	<10	2.5	1.8	<1	3	<100
CRR-107	365	n/a	n/a	120	0.9	<5	14.0	4.6	<100	<0.5	0.8	<10	2.9	2.7	5	2	<100
CRR-108	365	n/a	n/a	8	0.8	<5	0.4	0.4	<100	0.5	<0.5	<10	1.5	0.9	8	<2	<100
CRR-109	365	n/a	n/a	18	2.0	9	0.7	0.3	<100	<0.5	<0.5	<10	1.3	6.6	299	<2	220
CRR-110	365	n/a	n/a	63	4.6	<5	15.0	3.1	<100	0.5	<0.5	<10	6.1	5.9	67	<2	<100
CRR-111	364	n/a	n/a	23	0.3	<5	0.6	0.5	<100	<0.5	<0.5	<10	3.1	0.7	2	<2	<100
CRR-112	364	n/a	n/a	220	0.4	<5	13.0	4.9	<100	1.3	<0.5	<10	20.2	4.8	17	<2	<100
CRR-113	364	n/a	n/a	<5	0.4	<5	0.2	<0.1	<100	<0.5	<0.5	<10	0.5	4.4	2	<2	<100
CRR-114	364	n/a	n/a	27	0.4	<5	0.6	0.6	<100	<0.5	<0.5	<10	2.9	0.7	17	<2	<100
CRR-115	364	n/a	n/a	21	0.6	<5	0.7	0.6	<100	<0.5	<0.5	<10	2.3	0.3	2	<2	<100
CRR-116	361	n/a	n/a	36	0.4	<5	1.2	1.0	<100	<0.5	<0.5	<10	5.1	1.6	1	<2	<100
CTN-01	584	n/a	n/a	130	92.9	<5	2.0	3.8	<100	1.3	<0.5	<10	10.0	3.7	12	5	<100
CTN-02	585	n/a	n/a	5	24.0	<5	0.3	<0.1	<100	<0.5	<0.5	<10	0.6	5.6	1	<2	<100
CTN-03	583	8	n/a	160	32.2	<5	2.2	4.5	<100	1.7	<0.5	<10	15.0	3.1	4	<2	<100
CTN-04	582	10	n/a	230	45.9	<5	2.7	5.1	<100	0.9	0.6	<10	8.9	3.8	8	3	<100
CTN-05	581	11	n/a	240	41.1	<5	6.5	8.0	<100	1.5	0.6	<10	15.0	4.1	3	3	<100
CTN-06	581	<1	n/a	23	75.8	<5	1.5	0.7	<100	<0.5	<0.5	<10	1.1	2.8	<1	<2	<100
CTN-07	580	12	n/a	180	8.7	<5	2.7	10.1	<100	2.4	1.0	<10	18.0	5.7	3	5	150
CTN-08	580	n/a	n/a	160	2.5	<5	8.1	6.3	<100	1.9	<0.5	<10	7.8	2.6	2	<2	350
CTN-09	580	n/a	n/a	83	0.8	<5	8.4	12.8	<100	1.1	0.9	<10	7.9	1.4	<1	4	420
CTN-10	580	8	n/a	80	11.9	<5	1.5	2.8	<100	<0.5	<0.5	<10	8.5	5.3	2	<2	400
CTN-11	577	n/a	n/a	130	7.6	<5	6.9	12.4	<100	1.0	1.2	<10	7.9	1.6	2	3	210
CTN-12	578	12	n/a	240	31.5	<5	7.1	11.2	<100	0.8	1.0	<10	17.0	10.0	8	4	250
CTN-13	578	10	n/a	260	4.4	<5	5.1	11.7	<100	1.4	1.0	<10	13.0	2.6	3	2	<100
CTN-14	578	12	n/a	260	58.8	<5	2.2	13.6	<100	2.0	1.6	<10	18.0	6.9	3	7	210
CTN-16	578	9	n/a	300	51.5	<5	2.8	11.6	<100	2.4	1.6	<10	19.0	6.1	2	6	<100
CTN-18	579	n/a	n/a	140	16.7	<5	2.2	8.3	<100	2.1	1.0	<10	16.0	10.0	3	4	<100
CTN-19	701	n/a	n/a	160	1.3	<5	10.0	4.9	<100	<0.5	<0.5	<10	5.7	5.9	7	<2	3300
CTN-20	701	n/a	n/a	35	0.5	<5	3.9	3.5	<100	2.2	0.8	<10	20.0	2.5	2	3	<100
CTN-21	701	n/a	n/a	110	0.5	<5	0.6	0.4	<100	<0.5	<0.5	<10	3.4	1.8	3	<2	<100
CTN-22	701	n/a	n/a	21	0.3	<5	0.4	0.1	<100	<0.5	<0.5	<10	1.8	6.4	<1	<2	<100
CTN-23	576	20	n/a	130	24.4	<5	2.5	4.3	<100	<0.5	<0.5	<10	4.0	1.4	3	<2	<100
CTN-24	586	n/a	n/a	100	1.6	<5	3.9	6.0	<100	1.8	0.9	<10	13.0	11.0	2	3	<100
CTN-25	587	n/a	n/a	<5	51.5	<5	<0.2	<0.4	<100	<0.5	<0.5	<10	<0.2	17.0	1	<2	<100
CTN-26	586	n/a	n/a	<5	11.5	<5	0.4	<1.3	<100	<0.5	<0.5	<10	1.6	49.1	<1	<2	<100



Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CTN-27	424	245	n/a	190	0.8	<5	6.4	3.7	<100	0.8	0.6	<10	6.1	2.6	14	<2	<100
CTN-28	424	770	n/a	26	0.7	<5	0.6	0.4	<220	<0.5	<0.5	<10	0.5	2.3	4	<2	<100
CTN-29	424	50	n/a	10	0.7	<5	0.2	0.2	<100	<0.5	<0.5	<10	0.3	0.7	1	<2	<100
CTN-30	424	580	n/a	92	0.8	<5	3.3	2.3	<100	<0.5	<0.5	<10	5.7	2.6	11	<2	<100
CTN-31	425	18	n/a	120	1.2	<5	5.1	5.1	<100	0.8	0.7	<10	9.5	3.8	3	<2	<100
CTN-32	425	9600	n/a	180	2.7	<5	5.9	3.3	<100	0.9	<0.5	<10	11.0	3.4	9	<2	<100
CTN-33	600	60	n/a	110	0.1	<5	15.0	2.9	<100	0.8	<0.5	<10	3.3	1.4	1	<2	180
CTN-34	600	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CTN-35	600	49	n/a	67	0.2	<5	2.1	2.1	<100	<0.5	<0.5	<10	14.0	3.1	<1	<2	150
CTN-36	601	n/a	n/a	130	0.1	<5	7.2	7.2	<100	1.0	0.8	<10	18.0	2.1	<1	2	<100
CTN-37	601	n/a	n/a	160	0.3	<5	12.0	8.6	<100	0.9	1.0	<10	23.4	3.8	1	<2	<100
CTN-38	601	n/a	n/a	150	0.2	<5	9.4	7.1	<100	0.9	0.8	<10	17.0	3.2	<1	3	<100
CTN-39	601	8	n/a	<5	0.5	8	0.3	0.3	<100	<0.5	<0.5	<10	0.8	<0.2	<1	<2	<100
CTN-40	602	1120	n/a	11	0.2	<5	1.2	0.9	<100	<0.5	<0.5	<10	2.8	0.7	3	<2	<100
CTN-41	602	192	n/a	7	0.2	6	0.6	0.3	<100	<0.5	<0.5	<10	0.8	1.8	<1	<2	<100
CTN-42	702	11	n/a	<5	0.2	<5	<0.2	<0.3	<100	<0.5	<0.5	<10	0.2	10.0	2	<2	<100
CTN-43	702	n/a	n/a	10	0.2	<5	<0.2	0.2	<100	<0.5	<0.5	<10	0.9	2.2	2	<2	<100
CTN-44	426	210	n/a	7	0.4	<5	1.0	0.4	<100	<0.5	<0.5	<10	0.5	0.9	26	<2	<100
CTN-45	426	6	n/a	81	0.2	<5	4.5	0.9	<100	<0.5	<0.5	<10	0.2	0.5	16	<2	<100
CTN-46	426	6	n/a	13	0.2	<5	1.6	0.2	<100	<0.5	<0.5	<10	<0.2	<0.2	6	<2	<100
CTN-47	426	n/a	n/a	34	0.5	<5	1.2	0.9	<100	<0.5	<0.5	<10	1.4	0.4	4	<2	<100
CTN-48	426	12	n/a	36	0.2	<5	3.7	1.0	<100	<0.5	<0.5	<10	0.6	0.5	5	<2	<100
CTN-49	423	n/a	n/a	<5	0.2	<5	0.8	0.5	<100	<0.5	<0.5	<10	0.2	<0.2	2	<2	<100
CTN-50	423	n/a	n/a	260	0.4	<5	3.0	5.1	<100	0.8	0.6	<10	15.0	1.3	11	<2	<100
CTN-51	575	n/a	n/a	78	0.3	<5	4.0	9.1	<100	1.8	1.1	<10	14.0	3.4	<1	<2	<100
CTN-52	586	n/a	n/a	8	14.6	<5	0.9	0.5	<100	<0.5	<0.5	<10	1.4	7.1	2	<2	<100
CTN-53	586	n/a	n/a	69	38.7	<5	3.0	4.2	<100	<0.5	<0.5	<25	7.6	49.4	3	<2	<100
CTN-54	700	n/a	n/a	42	1.6	<5	<0.2	0.3	<100	<0.5	<0.5	<10	0.5	8.1	<1	<2	<100
CTN-55	700	n/a	n/a	32	<0.1	<5	0.2	0.1	<100	<0.5	<0.5	<10	0.9	5.6	1	<2	<100
CTN-56	701	n/a	n/a	33	161.0	<5	2.1	1.7	<230	0.6	<0.5	<23	7.3	25.1	2	<6	<100
CTN-57	701	n/a	n/a	54	3.5	<5	1.0	0.5	<100	<0.5	<0.5	<10	2.0	9.0	2	<2	<100
CTP-001	149	38	n/a	11	2.4	<5	25.8	3.2	<100	<0.5	<0.5	<10	1.5	2.6	<1	<2	900
CTP-002	149	63	n/a	220	1.3	<5	13.0	6.0	<100	0.8	0.8	<10	12.0	12.0	10	2	440
CTP-003	149	32	n/a	11	1.1	<5	17.0	4.3	<100	<0.5	<0.5	<10	3.4	2.8	52	<2	840
CTP-004	167	3800	n/a	23	100.0	<5	<0.2	0.4	<100	<0.5	<0.5	<21	0.7	3.3	133	<2	12100
CTP-005	165	2750	n/a	25	422.0	<5	<0.2	0.3	<290	0.8	<0.5	<42	<0.9	2.5	27	<9	6300
CTP-006	165	36	n/a	<5	122.0	<5	0.4	0.7	<100	<0.5	<0.5	<10	0.7	<0.2	177	4	210
CTP-009	144	5700	n/a	<10	6.7	<5	3.9	1.8	<100	0.5	<0.5	<10	3.1	8.1	<3	<2	99999
CTP-010	144	>10000	n/a	<5	10.4	5	0.4	1.1	<100	<0.5	<0.5	<10	0.7	5.6	9	<2	54300
CTP-011	144	380	n/a	250	3.2	<5	22.1	5.9	<100	0.6	0.6	<10	10.0	1.3	5	3	2200
CTP-012	145	48	n/a	360	1.5	<5	12.0	5.3	<100	0.9	0.6	<10	15.0	2.5	26	2	200

Table A-28 Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CTP-013	146	>10000	<5	<11	46.1	42	1.9	<0.6	<100	<0.5	<0.5	<24	1.0	33.8	13	<2	31500
CTP-014	146	n/a	n/a	9	1.0	<5	0.5	0.5	<100	<0.5	<0.5	<10	0.2	0.2	<1	<2	330
CTP-015	146	n/a	n/a	8	1.6	<5	0.6	0.6	<100	<0.5	<0.5	<10	0.8	0.5	<1	<2	<100
CTP-016	150	750	<5	270	1.2	<5	5.7	10.0	<100	2.0	1.1	<10	29.8	3.1	3	4	210
CTP-019	160	850	n/a	250	0.9	<5	1.3	4.1	<100	1.0	<0.5	<10	13.0	1.2	3	<2	<100
CTP-020	159	39	n/a	<5	0.3	<5	0.6	0.2	<100	<0.5	<0.5	<10	0.4	2.6	34	<2	<100
CTP-021	159	10	n/a	<5	0.4	<5	0.9	0.2	<100	<0.5	<0.5	<10	0.5	1.9	67	<2	140
CTP-022	169	20	n/a	62	1.9	<5	6.1	11.4	<100	<0.5	2.5	<10	4.0	6.3	9	4	150
CTP-023	169	37	n/a	51	0.6	<5	7.4	17.8	<100	<0.5	2.6	<10	7.7	5.6	2	6	<100
CTP-024	169	3	n/a	54	0.5	<5	4.4	5.3	<100	1.2	0.8	<10	11.0	4.3	2	4	<100
CTP-025	167	30	n/a	30	1.0	<5	8.9	5.4	<100	0.7	0.5	<10	20.1	6.9	16	<2	1200
CTP-030	172	3	n/a	18	0.6	<5	1.0	1.0	<100	<0.5	<0.5	<10	0.7	0.9	<1	<2	<100
CTP-031	121	187	n/a	180	24.6	<5	3.7	3.0	<100	0.7	<0.5	<10	17.0	4.1	4	<2	330
CTP-032	122	110	n/a	290	12.7	<5	4.5	4.1	<100	1.4	<0.5	<10	28.8	8.2	5	<2	380
CTP-033	121	45	n/a	220	11.4	<5	1.9	2.0	<100	1.1	<0.5	<10	20.5	3.2	2	<2	<100
CTP-034	117	2	n/a	130	0.3	<5	9.5	11.5	<100	2.4	1.5	<10	30.4	4.7	4	5	<100
CTP-035	117	<1	n/a	500	0.2	<5	16.0	3.1	<100	2.3	1.2	<10	36.6	4.8	1	7	340
CTP-036	117	<1	n/a	420	0.3	<5	20.2	10.9	<100	1.3	5.7	<10	5.0	6.0	8	28	200
CTP-037	150	76	<5	270	1.4	<5	5.7	8.9	<100	1.8	1.4	<10	27.7	2.7	3	4	<100
CTP-038	171	52	n/a	8	98.3	<5	1.1	1.2	<100	<0.5	<0.5	<23	<0.5	3.6	57	5	190
CTP-046	210	1140	n/a	50	271.0	<5	<0.2	0.9	<290	<0.5	<0.5	<41	1.7	2.8	<170	<5	550
CTP-047	210	1700	n/a	52	251.0	<5	<0.2	1.1	<200	<0.5	<0.5	<27	3.0	4.0	6	4	470
CTP-48a	378	n/a	<10	130	0.3	<5	2.7	10.3	<100	1.8	1.8	<10	209.0	12.0	71	<2	<100
CTP-48b	378	n/a	n/a	200	<0.1	<5	1.2	1.4	<100	0.5	<0.5	<10	14.0	1.1	4	<2	<100
CTP-049	377	310	n/a	110	1.9	<5	1.1	0.7	<100	<0.5	<0.5	<10	4.5	3.9	89	<2	280
CTP-050	377	1500	n/a	210	1.2	<5	1.5	1.6	<100	0.7	<0.5	<10	6.9	2.5	94	<2	180
CTP-051	377	510	n/a	270	0.7	<5	2.7	2.4	<100	1.1	<0.5	<10	14.0	1.8	58	<2	480
CTP-052	374	5700	n/a	110	14.5	<5	14.0	9.0	<100	1.5	1.3	<10	21.0	63.0	10	4	130
CTP-053	374	>10000	n/a	16	70.9	<5	3.3	1.7	<240	<0.5	<0.5	<34	3.3	56.7	6	<5	1100
CTP-054	374	>10000	n/a	<5	37.9	<5	2.7	0.9	<100	<0.5	0.5	<10	3.2	33.0	8	<2	740
CTP-055	137	170	n/a	<5	97.8	<5	1.8	3.1	<210	<0.5	<0.5	<21	3.5	0.8	47	3	<100
CTP-056	137	130	n/a	96	124.0	<5	8.7	7.9	<260	0.8	0.9	<26	17.0	2.6	44	8	<100
CTP-057	137	26	n/a	13	19.3	<5	1.6	1.1	<100	<0.5	<0.5	<10	3.1	1.5	10	<2	<100
CTP-058	373	31	<5	190	0.7	<5	13.0	6.1	<100	1.9	1.0	<10	24.3	13.0	102	2	<100
CTP-059	373	165	n/a	75	0.6	<5	3.3	1.1	<100	0.5	<0.5	<110	2.2	3.9	24	<2	<100
CTP-060	373	38	<5	240	0.5	<5	9.3	3.9	<100	2.0	0.7	<48	10.0	6.5	75	3	140
CTP-061	373	104	n/a	230	0.7	<5	8.0	4.7	<100	1.6	0.5	<10	13.0	10.0	273	3	<100
CTP-062	160	24	<5	6	24.7	<5	1.1	0.9	<100	<0.5	<0.5	<10	0.8	0.4	33	<2	<100
CTP-063	143	355	n/a	280	4.4	<5	16.0	7.8	<100	1.4	1.2	<10	19.0	20.0	50	4	12300
CTP-064	143	150	n/a	<5	2.4	<5	1.1	0.6	<100	<0.5	<0.5	<10	0.3	0.4	2	<2	130
CTP-065	143	>10000	n/a	<19	77.5	23	2.3	<0.3	<460	<0.5	<0.5	<45	3.1	12.0	9	<2	12100

Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CTP-066	143	>10000	n/a	28	84.3	13	4.1	2.4	<320	<0.5	<0.5	<30	5.8	3.5	19	<6	9800
CTP-067	178	2800	<5	130	2.3	<5	1.0	2.8	<100	<0.5	<0.5	<10	10.0	1.1	6	<2	460
CTP-068	178	2840	n/a	140	2.6	<5	1.6	3.0	<100	<0.5	<0.5	<10	8.7	2.6	11	<2	630
CTP-069	178	23	n/a	140	2.4	<5	17.0	7.4	<100	1.0	1.1	<10	9.4	1.6	<1	2	110
CTP-070	137	35	n/a	<5	5.3	<5	0.4	0.4	<100	<0.5	<0.5	<10	0.5	0.6	<1	<2	<100
CTP-071	134	170	n/a	20	4.2	<5	0.3	0.6	<100	<0.5	<0.5	<10	0.8	1.6	2	<2	<100
CTP-072	134	11	n/a	230	0.5	<5	9.4	9.5	<100	1.4	1.6	<10	19.0	1.8	2	3	<100
CTP-073	134	24	<5	250	2.4	<5	5.9	12.5	<100	1.3	2.5	<10	26.4	5.6	4	6	<100
CTP-074	134	81	n/a	110	1.6	<5	1.3	3.5	<100	<0.5	0.5	<10	8.0	3.2	5	<2	<100
CTP-075	376	n/a	n/a	49	0.2	<5	19.0	8.2	<100	4.4	1.1	<10	5.0	1.7	<1	2	160
CTP-076	376	n/a	n/a	50	0.2	<5	20.5	8.6	<100	5.0	1.2	<10	5.1	1.9	<1	3	<100
CTP-077	160	n/a	n/a	72	0.3	<5	3.1	3.0	<100	<0.5	<0.5	<10	2.7	0.9	<1	<2	<100
CTP-078	160	n/a	n/a	110	0.5	<5	2.7	2.2	<100	<0.5	<0.5	<10	3.3	1.2	<1	<2	<100
CTP-079	160	n/a	n/a	62	0.9	<5	3.9	1.8	<100	1.0	<0.5	<10	5.9	2.1	1	2	<100
CTP-080	160	n/a	n/a	9	0.2	<5	1.0	0.9	<100	<0.5	<0.5	<10	1.3	0.8	<1	<2	<100
CTP-081	160	n/a	n/a	13	0.2	<5	0.7	0.9	<100	<0.5	<0.5	<10	1.2	0.9	<1	<2	<100
CTP-082	133	n/a	n/a	120	0.5	<5	7.2	5.3	<100	1.4	0.6	<10	12.0	2.3	<1	<2	<100
CTP-083	133	n/a	<5	100	0.4	<5	6.0	4.4	<100	1.1	<0.5	<10	10.0	1.9	1	<2	<100
CTP-084	133	n/a	n/a	20	0.2	<5	1.4	1.0	<100	<0.5	<0.5	<10	3.0	10.0	<1	<2	<100
CTP-085	133	n/a	n/a	120	0.3	<5	5.0	5.0	<100	1.6	0.7	<10	14.0	2.1	3	<2	<100
CTP-086	133	n/a	<5	110	0.3	<5	5.1	4.8	<100	1.2	0.6	<10	14.0	2.0	3	<2	<100
CTP-087	142	4	n/a	170	2.1	<5	15.0	4.9	<100	0.7	1.0	<10	11.0	1.7	<1	2	<100
CTP-088	142	2	n/a	5	2.3	<5	0.8	1.0	<100	<0.5	<0.5	<10	0.3	0.3	1	<2	<100
CTP-089	142	1	n/a	<5	0.4	<5	0.4	0.6	<100	<0.5	<0.5	<10	0.2	0.6	<1	<2	<100
CTP-090	142	2	n/a	<5	0.1	<5	<0.2	0.7	<100	<0.5	<0.5	<10	<0.2	<0.2	<1	<2	<100
CTP-091	139	9	n/a	230	4.9	<5	18.0	4.5	<100	<0.5	0.6	<10	3.1	4.1	3	4	<100
CTP-092	139	<1	n/a	8	0.5	<5	0.8	0.5	<100	<0.5	<0.5	<10	0.8	0.4	<1	<2	<100
CTP-093	138	1	n/a	<5	0.2	<5	0.2	0.2	<100	<0.5	<0.5	<10	0.2	0.7	<1	<2	<100
CTP-094	138	5	n/a	<5	0.2	<5	0.3	0.2	<100	<0.5	<0.5	<10	0.4	0.6	<1	<2	<100
CTP-095	138	1860	n/a	<5	10.7	<5	0.7	<0.3	<100	<0.5	<0.5	<10	0.9	12.0	<1	<2	2200
CTP-096	140	16	n/a	15	3.7	<5	1.2	1.3	<100	<0.5	<0.5	<10	1.8	1.1	2	<2	<100
CTP-097	140	11	n/a	12	45.7	<5	1.1	1.4	<100	<0.5	<0.5	<10	2.5	1.4	14	<2	<100
CTP-098	141	63	n/a	<5	82.9	<5	1.5	1.6	<100	<0.5	<0.5	<21	2.6	1.3	53	3	<100
CTP-099	133	n/a	n/a	180	0.9	<5	5.2	5.8	<100	1.5	0.8	<10	18.0	2.6	<1	2	<100
CTP-100	133	n/a	n/a	160	0.7	<5	5.8	5.6	<100	1.3	0.8	<10	17.0	2.0	<1	3	<100
CTP-101	133	n/a	n/a	130	0.6	<5	7.3	6.2	<100	1.7	0.9	<10	15.0	2.6	1	<2	<100
CTP-102	133	n/a	n/a	120	0.6	<5	8.0	6.0	<100	1.2	0.7	<10	15.0	2.4	<1	<2	<100
CTP-103	133	n/a	n/a	120	0.4	<5	6.2	6.2	<100	1.5	0.7	<10	16.0	2.6	<1	<2	<100
CTP-104	133	n/a	n/a	110	0.5	<5	6.8	6.0	<100	1.9	0.7	<10	15.0	2.4	<1	<2	<100
CTP-105	133	n/a	n/a	130	0.4	<5	6.7	6.7	<100	1.7	0.8	<10	20.9	3.0	<1	<2	<100
CTP-106	133	n/a	n/a	120	0.5	<5	6.7	6.5	<100	1.6	0.7	<1	19.0	2.9	<1	2	<100

Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CTP-107	131	n/a	n/a	42	0.2	<5	18.0	8.4	<100	5.2	1.2	<10	5.8	1.8	<1	3	160
CTP-108	131	n/a	n/a	47	0.2	<5	19.0	7.8	<100	4.7	1.2	<10	5.4	1.7	2	3	<100
CTP-109	372	n/a	n/a	<12	0.2	<5	1.3	9.4	<100	0.9	1.8	<10	37.6	3.3	2	3	<100
CTP-110	372	n/a	n/a	54	0.2	<5	10.0	13.9	<100	2.0	2.5	<10	28.2	5.8	4	9	<100
CTP-111	372	n/a	n/a	31	0.9	<5	3.4	7.4	<100	0.6	1.0	<10	22.9	4.5	4	2	<100
CTP-112	372	n/a	n/a	40	<0.1	<5	3.1	3.9	<100	0.6	0.6	<10	9.3	1.6	11	2	<100
CTP-113	373	n/a	n/a	360	0.2	<5	4.2	6.7	<100	1.2	1.1	<10	27.4	6.3	41	3	<100
CTP-114	122	n/a	n/a	220	0.1	<5	5.4	4.4	<100	1.5	<0.5	<10	34.0	4.1	<1	<2	<100
CTP-115	122	n/a	n/a	220	<0.1	<5	5.7	4.4	<100	1.8	0.6	<10	34.0	3.6	<1	<2	<100
CTP-116	122	n/a	n/a	290	1.4	<5	3.5	3.1	<100	1.3	<0.5	<10	30.1	3.8	8	<2	<100
CTP-117	122	n/a	n/a	280	0.3	<5	1.5	1.2	<100	1.1	<0.5	<10	30.6	4.9	<1	<2	<100
CTP-118	124	n/a	n/a	290	0.1	<5	3.7	2.7	<100	1.6	<0.5	<10	37.8	6.4	<1	<2	<100
CTP-119	124	n/a	n/a	28	0.4	<5	0.5	0.4	<100	<0.5	<0.5	<10	2.6	0.4	<1	<2	<100
CTP-120	124	n/a	n/a	250	0.4	<5	7.0	4.4	<100	1.0	0.7	<10	9.3	14.0	21	<2	<100
CTP-121	121	n/a	n/a	89	7.8	<5	2.2	1.9	<100	<0.5	<0.5	<10	12.0	4.6	3	<2	<100
CTP-122	121	n/a	n/a	20	33.3	<5	0.4	0.4	<100	<0.5	<0.5	<10	1.7	0.9	<1	<2	<100
CTP-123	120	114	n/a	180	5.2	<5	1.7	2.2	<100	1.9	<0.5	<10	28.8	10.0	22	<2	<100
CTP-124a	375	n/a	<5	54	0.7	<5	18.0	53.1	<100	16.0	6.8	<10	216.0	23.6	<1	10	<100
CTP-124b	375	n/a	n/a	130	0.2	<5	4.2	3.2	<100	1.2	0.6	<10	7.4	1.3	<1	<2	<100
CWC-001	312	n/a	n/a	220	92.4	<5	8.1	5.5	<100	0.7	<0.5	<21	11.0	2.5	24	5	110
CWC-002	312	n/a	n/a	120	17.9	<5	2.6	1.0	<100	<0.5	<0.5	<10	1.5	0.8	5	<2	<100
CWC-003	313	n/a	n/a	230	3.0	<5	1.1	4.2	<100	2.2	0.7	<10	25.5	3.9	2	3	<100
CWC-004	308	n/a	n/a	170	0.4	<5	2.9	4.7	<100	<0.5	0.6	<10	13.0	2.3	<1	<2	<100
CWC-009	317	n/a	n/a	19	81.7	<5	0.3	0.7	<100	<0.5	<0.5	<10	4.2	1.5	<1	<2	<100
CWC-010	316	n/a	n/a	65	84.6	<5	0.9	0.9	<100	<0.5	<0.5	<10	4.5	0.9	2	<2	<100
CWC-011	316	n/a	n/a	290	6.0	<5	1.1	4.4	<100	2.3	0.7	<10	23.9	3.3	<1	2	110
CWC-012	314	n/a	n/a	190	1.5	<5	1.9	5.3	<100	2.3	0.7	<10	25.7	3.7	1	3	<100
CWC-014	422	n/a	n/a	<5	1.0	<5	0.2	0.2	<100	<0.5	<0.5	<10	0.2	0.5	3	<2	<100
CWC-015	263	n/a	n/a	26	<0.1	<5	48.1	15.1	<100	1.1	2.1	<10	2.3	0.6	<2	6	200
CWC-016	230	n/a	n/a	52	4.4	<5	5.9	5.8	<100	<0.5	1.0	<10	28.8	3.3	13	2	<100
CWC-017	230	n/a	n/a	190	0.6	<5	3.6	14.1	<100	<0.5	0.8	<10	51.6	2.4	2	<2	<100
CWC-019	252	n/a	n/a	45	128.0	<5	18.0	2.3	<100	0.6	<0.5	<22	1.3	<0.5	4	4	<100
CWC-020	239	n/a	n/a	130	0.2	<5	5.4	3.9	<100	<0.5	<0.5	<10	8.6	1.8	3	<2	<100
CWC-022	256	n/a	n/a	92	0.3	<5	11.0	5.0	<100	0.6	0.8	<10	8.0	7.1	3	3	550
CWC-023	256	n/a	n/a	12	0.6	<5	3.3	3.2	<100	0.6	<0.5	<10	4.5	7.7	2	<2	1500
CWC-024	257	n/a	n/a	<5	5.7	<5	0.3	0.3	<100	<0.5	<0.5	<10	0.6	21.3	8	<2	5500
CWC-025	237	8500	n/a	11	7.7	<5	6.3	1.3	<100	<0.5	<0.5	<24	<0.6	4.3	3	<2	2900
CWC-026	237	6900	n/a	55	10.0	<5	4.6	2.5	<100	<0.5	<0.5	<10	8.2	8.0	<1	<2	300
CWC-027	238	n/a	n/a	140	7.1	<5	10.0	2.2	<100	<0.5	0.6	<10	3.4	3.2	3	4	1100
CWC-028	236	n/a	n/a	41	1.2	<5	5.4	1.1	<100	<0.5	<0.5	<10	1.3	0.6	6	<2	<100
CWC-029	235	n/a	n/a	73	7.4	<5	8.3	0.8	<100	<0.5	<0.5	<10	7.3	3.1	3	<2	930



Table A-2B Analyses of rock samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

(Analyses in ppm except Pt(ppb) or otherwise noted; &lt;, less than; n/a, not analyzed)

Sample No.	Sample Site	Pb	Pt	Rb	Sb	Se	Sc	Sm	Sn	Ta	Tb	Te	Th	U	W	Yb	Zn
CWC-030	235	n/a	n/a	26	3.3	<5	7.8	0.8	<100	<0.5	<0.5	<10	0.3	1.1	2	<2	140
CWC-031	280	n/a	n/a	9	1.7	<5	6.3	4.8	<100	1.4	<0.5	<10	22.0	4.2	4	<2	<100
CWC-032	279	n/a	n/a	100	0.5	<5	6.5	0.9	<100	<0.5	<0.5	<10	0.2	0.5	6	<2	1600
CWC-033	253	n/a	n/a	64	8.2	<5	7.9	3.1	<100	<0.5	0.7	<10	2.3	1.3	4	2	<100
CWC-034	254	n/a	n/a	86	64.6	<5	4.6	1.8	<100	<0.5	<0.5	<10	3.5	1.4	<1	<2	<100
CWC-035	251	3500	n/a	46	48.2	<5	0.8	12.2	<100	<0.5	<0.5	<10	46.9	1.2	2	<2	110
CWC-036	254	25	n/a	23	4.3	<5	5.7	1.3	<100	<0.5	0.7	<10	3.3	0.8	<1	3	<100
CWC-037	245	n/a	n/a	160	10.0	<5	11.0	10.0	<100	0.7	1.3	<10	20.0	2.4	7	<2	<100
CWC-038	250	n/a	n/a	190	8.7	<5	4.8	6.1	<100	<0.5	<0.5	<10	23.7	2.4	7	<2	1700
CWC-039	249	>10000	n/a	41	63.4	<5	3.1	2.3	<220	<0.5	<0.5	<22	1.7	5.7	12	<2	2800
CWC-040	248	>10000	n/a	93	44.7	<5	1.3	0.9	<230	<0.5	<0.5	<24	3.1	3.1	53	<2	1700
CWC-041	246	>10000	n/a	84	11.7	<12	5.5	1.7	<350	<0.5	<0.5	<38	4.7	6.6	<1	<7	2900
CWC-042	244	n/a	n/a	7	1.2	<5	2.8	1.1	<100	<0.5	<0.5	<10	0.8	2.4	2	<2	<100
CWC-043	243	n/a	n/a	67	18.5	<5	2.6	1.9	<100	<0.5	<0.5	<10	4.1	2.2	<1	<2	12600
CWC-044	242	n/a	n/a	64	26.1	<5	7.1	2.4	<100	<0.5	<0.5	<10	7.4	3.3	2	<2	8500
CWC-045	241	n/a	n/a	10	0.6	<5	3.7	1.3	<100	<0.5	<0.5	<10	1.9	1.7	4	<2	<100
CWC-046	240	>10000	n/a	<5	53.1	22	<0.2	<0.5	<100	<0.5	<0.5	<10	1.4	32.2	6	<2	3000
CWC-047	228	n/a	n/a	190	1.4	<5	4.1	15.6	<100	0.6	1.8	<10	89.0	5.1	<1	<2	<100
CWC-048	228	n/a	n/a	100	0.2	<5	0.4	2.5	<100	<0.5	0.6	<10	11.0	3.0	<1	<2	<100
CWC-050	320	n/a	n/a	310	26.1	<5	5.5	10.0	<100	1.3	1.0	<10	24.1	5.3	13	<2	<100
CWC-051	219	n/a	n/a	110	9.0	<5	1.2	4.0	<100	<0.5	<0.5	<10	19.0	1.9	4	<2	<100
CWC-052	218	n/a	n/a	34	0.6	<5	0.7	2.6	<100	<0.5	0.5	<10	7.4	2.3	<1	<2	<100
CWC-053	218	n/a	n/a	240	0.9	<5	3.2	11.8	<100	<0.5	1.0	<10	65.6	4.9	5	<2	<100
CWC-054	221	n/a	n/a	100	3.9	<5	1.4	1.9	<100	<0.5	<0.5	<10	10.0	5.7	117	<2	1100
CWC-055	221	380	n/a	<5	1.0	<5	<0.2	0.3	<100	<0.5	<0.5	110	1.0	2.2	<1	<2	<100
CWC-056	225	5500	n/a	25	16.5	<5	1.4	1.3	<100	<0.5	<0.5	<10	3.3	17.0	58	<2	1800
CWC-057	222	n/a	n/a	110	1.7	<5	1.6	2.1	<100	<0.5	<0.5	<10	7.0	3.1	5	<2	200
CWC-058	225	5400	n/a	46	4.0	<5	0.7	2.5	<100	<0.5	<0.5	<10	16.0	44.2	66	<2	1600
CWC-059	225	>10000	n/a	<5	24.0	<5	0.9	<1.3	<100	<0.5	<0.5	<10	0.8	58.3	10	<2	55900
CWC-060	226	1340	n/a	19	1.2	<5	0.5	1.2	<100	<0.5	<0.5	<10	5.1	2.5	6	<2	430
CWC-061	227	244	n/a	36	5.4	<5	1.6	1.5	<100	<0.5	<0.5	<10	4.1	1.4	9	<2	250
CWC-062	224	n/a	n/a	9	13.1	<5	0.7	0.5	<100	<0.5	<0.5	<10	4.3	6.0	2	<2	190
CWC-063	225	n/a	n/a	29	1.0	<5	0.5	0.6	<100	<0.5	<0.5	<10	2.7	0.3	2	<2	<100
CWC-064	212	n/a	n/a	80	4.7	<5	2.5	5.0	<100	0.6	0.9	<10	11.0	3.6	10	<2	<100
CWC-065	214	n/a	n/a	45	0.4	<5	0.5	3.4	<100	<0.5	0.6	<10	3.0	1.5	<1	<2	<100
CWC-066	329	n/a	n/a	380	17.2	<5	1.1	3.4	<100	1.6	0.9	<10	18.0	2.7	2	2	<100
CWC-067	329	n/a	n/a	350	16.3	<5	1.1	3.6	<100	1.7	0.7	<10	18.0	3.0	7	2	<100
CWC-068	329	n/a	n/a	380	17.2	<5	1.2	3.8	<100	1.8	0.5	<10	18.0	3.2	3	<2	<100



Table A-3 Whole rock analyses of samples from the East Mojave National Scenic Area, San Bernardino County, CA

Sample No.	Site No.	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	MgO	CaO	Na <sub>2</sub> O	K <sub>2</sub> O	TiO <sub>2</sub>	P <sub>2</sub> O <sub>5</sub>	MnO	BaO	LOI	Total
CDC-059	176	0.85	0.28	0.31	10.04	45.79	0.10	0.02	0.01	0.04	0.01	0.14	43.13	100.72
CDC-061	176	1.74	0.07	0.96	0.96	8.13	<0.01	<0.01	<0.01	0.05	0.23	61.60	7.92	81.68
CDC-062	175	1.10	0.05	0.34	45.05	2.17	<0.01	<0.01	<0.01	<0.01	<0.01	0.71	51.37	100.84
CDC-066	175	4.64	0.09	0.31	36.31	11.43	0.02	<0.01	<0.01	<0.01	<0.01	0.18	47.32	100.34
CDC-067	175	1.94	0.06	0.36	44.54	3.08	0.02	<0.01	<0.01	<0.01	<0.01	0.13	51.17	101.32
CDC-071	163	2.65	0.64	0.49	21.40	30.51	0.08	<0.01	0.03	0.01	0.01	0.02	44.43	100.29
CDC-075	175	1.74	<0.01	0.25	39.92	9.38	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	50.01	101.41
CDC-116	196	1.74	0.06	0.25	20.60	30.83	<0.01	0.01	<0.01	<0.01	0.01	0.03	44.50	98.06
CDC-120	195	2.57	0.03	0.27	21.16	31.93	<0.01	0.02	<0.01	<0.01	0.01	0.03	43.74	99.78
CDC-121	195	2.53	0.06	0.04	0.77	53.86	<0.01	0.04	0.01	<0.01	<0.01	0.03	42.73	100.10
CDC-128	194	8.96	0.35	0.31	15.94	36.03	<0.01	0.08	0.03	0.38	0.01	0.03	38.89	101.01
CDC-130	194	1.98	<0.01	0.17	21.35	30.88	<0.01	0.02	<0.01	0.02	0.01	0.03	44.22	98.71
CDC-131	193	2.01	0.01	0.18	21.22	30.57	<0.01	0.03	<0.01	0.01	0.01	0.03	43.82	97.92
CDC-135	193	3.02	<0.01	0.22	20.56	30.76	<0.01	0.02	<0.01	0.07	0.02	0.03	44.92	99.65
CDC-136	193	4.32	0.10	0.24	20.52	30.50	<0.01	0.04	<0.01	0.07	0.02	0.03	44.58	100.43
CDC-137	192	9.64	0.20	0.29	19.90	30.21	<0.01	0.05	0.01	0.03	0.01	0.04	39.55	99.95
CDC-145	190	1.87	0.05	0.16	5.88	47.47	<0.01	0.04	<0.01	0.02	0.01	0.04	44.63	100.20
CDC-153	191	1.10	0.05	0.28	21.60	29.57	<0.01	0.04	<0.01	<0.01	0.02	0.04	44.78	97.50
CEM-002	401	6.24	3.15	75.93	2.85	4.27	0.05	0.14	0.06	0.13	0.05	0.03	4.92	97.82
CEM-009	400	3.48	0.34	1.49	19.13	30.81	0.10	0.01	<0.01	0.08	0.40	<0.01	43.35	99.20
CEM-027	371	9.09	0.70	85.04	0.36	3.47	0.03	<0.01	<0.01	0.17	0.98	0.02	<0.01	99.89
CMH-001	698	0.34	0.17	0.29	18.13	34.78	0.08	<0.01	<0.01	0.03	0.04	0.01	46.26	100.15
CMM-08-W	055	47.42	14.04	15.82	5.45	6.23	3.76	1.10	2.35	0.40	0.22	0.07	2.24	99.09
CMM-10-34	046	76.04	0.18	0.35	4.22	5.99	0.05	0.04	0.01	0.05	0.03	<0.01	11.14	98.11
CMM-10-49	034	98.58	0.78	0.42	0.09	0.11	0.01	0.21	0.06	0.04	<0.01	0.04	<0.01	100.35
CMM-10-N	045	23.80	5.08	1.41	13.69	23.08	0.10	4.16	0.01	<0.01	0.69	<0.01	26.32	98.35
CMM-11-32	092	73.50	13.64	1.64	0.43	1.14	3.29	4.97	0.25	0.06	0.04	0.11	1.38	100.44
CMM-11-52	087	63.24	16.77	5.50	2.10	5.25	3.03	2.63	0.62	0.15	0.10	0.11	1.72	101.22
CMM-11-53	087	34.62	2.31	1.93	25.20	30.61	0.31	0.10	0.05	<0.01	0.05	0.02	4.45	99.65
CMM-11-57	085	38.49	2.26	0.89	39.38	3.39	<0.01	0.02	0.04	<0.01	0.01	0.03	15.46	100.00
CMM-11-58	085	34.41	14.78	5.28	4.90	30.45	0.11	0.46	0.83	0.19	0.26	0.76	6.80	99.23
CMM-11-60	086	8.82	2.31	0.76	15.83	30.39	<0.01	0.10	0.17	<0.01	0.02	0.02	41.81	100.25
CMM-11-F	079	4.67	0.95	0.53	18.72	34.18	0.07	<0.01	0.05	<0.01	0.03	<0.01	41.31	100.54
CMM-11-H	081	48.12	21.49	3.36	4.09	15.39	1.93	1.51	1.10	0.21	0.38	0.07	2.74	100.37
CMM-11-I	077	34.49	5.55	2.13	37.48	2.83	0.01	0.02	0.19	<0.01	0.03	0.03	15.71	98.47
CMM-11-J	077	1.41	0.24	0.27	21.97	30.70	0.01	0.02	0.01	<0.01	0.02	0.03	46.30	100.98
CMM-11-V	081	4.53	0.37	0.34	15.64	37.01	<0.01	0.07	0.01	<0.01	0.01	0.05	41.90	99.94
CMM-14-28	025	1.04	0.28	0.32	21.12	31.26	0.03	0.09	0.01	<0.01	0.01	0.03	46.96	101.16

Table A-3 Whole rock analyses of samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Sample No.	Site No.	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	MgO	CaO	Na <sub>2</sub> O	K <sub>2</sub> O	TiO <sub>2</sub>	P <sub>2</sub> O <sub>5</sub>	MnO	BaO	LOI	Total
CMM-14-34	027	0.77	0.17	0.20	20.54	32.31	0.02	0.05	0.01	<0.01	<0.01	0.03	47.16	101.27
CMM-14-R	032	6.28	1.67	0.66	19.45	27.65	0.05	0.76	0.06	0.03	0.02	0.03	43.31	99.98
CMM-16-47	022	13.30	4.99	1.42	17.02	23.43	0.02	1.57	0.19	0.11	0.04	0.03	37.43	99.54
CMM-16-48	022	7.02	0.79	0.34	19.90	28.81	0.03	0.20	0.03	0.15	0.01	0.03	43.65	100.96
CMM-20-58	098	1.49	0.19	0.31	21.03	30.45	0.06	0.07	<0.01	<0.01	0.03	0.02	46.08	99.74
CRM-003	412	99.81	0.02	0.24	<0.01	0.10	0.08	0.01	<0.01	0.02	<0.01	<0.01	0.05	100.36
CRM-004	412	65.15	19.06	0.20	<0.01	0.03	1.94	13.68	<0.01	<0.01	<0.01	0.09	0.44	100.63
CRM-009	266	1.12	0.06	0.05	0.68	54.29	0.08	0.04	<0.01	0.07	<0.01	<0.01	43.75	100.16
CRM-011	265	24.15	2.70	0.51	0.44	44.65	0.26	0.49	0.14	0.13	0.02	<0.01	25.75	99.24
CRM-050	298	0.80	0.02	<0.01	0.31	56.03	0.02	0.02	<0.01	0.01	<0.01	0.03	43.69	100.95
CRR-007	340	1.19	0.49	0.34	1.40	51.87	0.04	0.14	0.02	0.04	0.08	<0.01	42.49	98.09
CRR-015	341	2.35	0.57	93.79	<0.01	0.66	<0.01	0.04	0.06	0.01	0.02	0.04	2.55	100.12
CTP-007	147	93.96	3.10	0.73	0.17	0.09	0.08	1.20	0.08	0.03	<0.01	0.01	0.85	100.31
CTP-008	147	96.50	2.32	0.55	0.12	0.13	0.06	0.80	0.06	0.05	0.01	0.01	0.81	101.40
CTP-009	144	14.44	4.52	26.02	1.26	13.29	0.02	0.17	0.14	0.18	0.40	<0.01	22.61	83.06
CTP-012	145	46.34	14.19	5.97	1.48	10.79	0.09	7.97	0.46	0.10	0.12	0.18	11.38	99.06
CTP-013	146	11.87	1.65	51.62	0.51	2.20	0.03	0.27	0.06	0.20	0.04	<0.01	13.51	81.97
CTP-014	146	1.80	0.53	0.40	3.76	49.63	0.08	0.12	0.02	0.04	0.05	<0.01	43.51	99.95
CTP-015	146	2.36	0.60	0.35	4.36	48.78	0.07	0.14	0.02	0.02	0.01	<0.01	43.16	99.89
CTP-017	166	4.19	2.69	0.89	0.48	52.37	0.08	0.15	0.09	0.03	<0.01	<0.01	39.27	100.25
CTP-018	166	0.82	0.47	0.21	0.54	54.56	0.07	0.16	0.02	0.03	<0.01	<0.01	42.93	99.82
CTP-026	172	1.64	0.40	0.16	0.94	53.98	0.10	0.13	<0.01	0.01	<0.01	<0.01	43.60	100.99
CTP-027	172	<0.01	0.04	0.01	2.25	52.94	0.09	<0.01	<0.01	0.03	<0.01	<0.01	44.14	99.53
CTP-028	172	16.59	0.07	0.03	2.88	42.32	0.09	<0.01	<0.01	0.04	<0.01	<0.01	36.62	98.69
CTP-029	172	<0.01	0.09	0.02	0.86	54.37	0.10	<0.01	<0.01	0.01	<0.01	<0.01	44.03	99.52
CTP-038	171	79.90	0.24	7.77	0.58	4.18	0.02	0.05	0.01	0.02	0.01	<0.01	5.17	97.96
CTP-044	168	54.14	21.02	7.42	2.20	1.32	0.53	6.40	0.99	0.12	0.08	0.08	4.67	98.95
CTP 075	376	46.10	16.39	11.17	6.76	7.73	4.75	2.09	2.76	0.65	0.17	0.03	0.27	98.86
CTP 076	376	46.76	16.48	11.12	6.77	7.83	4.36	2.04	2.73	0.64	0.17	0.04	<0.01	98.96
CTP 079	160	36.81	4.97	0.96	10.92	16.19	0.08	2.81	0.32	<0.01	<0.01	0.02	25.55	98.64
CTP 080	160	4.68	0.98	0.48	19.99	28.20	0.08	0.52	0.07	<0.01	<0.01	<0.01	44.60	99.63
CTP 081	160	10.15	1.16	0.51	18.44	26.67	0.04	0.75	0.06	<0.01	0.01	<0.01	41.73	99.53
CTP-087	142	60.53	15.68	5.46	2.16	4.09	1.64	4.34	0.69	0.15	0.07	0.10	5.55	100.47
CTP-088	142	9.07	0.42	0.34	18.11	29.93	0.08	0.11	0.03	0.05	0.02	0.03	42.95	101.13
CTP-089	142	14.52	0.31	0.14	0.50	47.86	0.06	0.07	0.01	0.03	<0.01	0.03	37.26	100.81
CTP-090	142	0.90	0.11	0.06	0.29	56.20	0.06	0.04	<0.01	0.01	<0.01	0.03	43.35	101.07
CTP-107	131	46.70	16.31	11.10	6.60	7.66	4.71	1.93	2.76	0.74	0.17	0.07	0.49	99.24



Table A-3 Whole rock analyses of samples from the East Mojave National Scenic Area, San Bernardino County, CA--Cont.

Sample No.	Site No.	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	MgO	CaO	Na <sub>2</sub> O	K <sub>2</sub> O	TiO <sub>2</sub>	P <sub>2</sub> O <sub>5</sub>	MnO	BaO	LOI	Total
CTP-108	131	47.69	16.32	10.83	6.79	7.84	4.17	1.82	2.70	0.68	0.17	0.06	0.86	99.91
CWC-013	331	81.25	12.04	0.21	0.39	0.31	0.23	0.14	0.08	0.02	<0.01	<0.01	6.41	101.10



Table A-4. X-ray diffraction mineral identification in the East Mojave National Scenic Area, San Bernardino County, CA  
[<, less than; >, greater than; =, equal; =, NA, not available]

Sample No.	Map No.	Minerals
CRM-33	306	Smectite
CMM-10-34	46	Calcite > phlogopite > talc
CMM-11-29A	82	Vesuvianite
CWC-5	311	Clinoptilolite > smectite > opal
CWC-7	315	Cristobalite > feldspar > mordenite
CWC-8	315	Quartz
CWC-49	319	Quartz > feldspar = smectite
CTN-15	578	Quartz > feldspar > mordenite = smectite
CTN-17	579	Smectite > quartz
CTN-34	600	Feldspar = mordenite





Table A-5.1. Perlite tests for rock samples  
in the East Mojave National Scenic Area,  
San Bernardino County, CA  
[Perlite expansion data, furnace operated at 1300°F]

Sample	Expanded density (lb/ft <sup>3</sup> )	% Yield	% Brightness	% Sinkers	Compacted density (lb/ft <sup>3</sup> )
CTN-58	2.49	82	68.3	8.3	3.57
CWC-069	2.21	93	65.5	8.4	3.13
CWC-018	3.73	94	63.1	3.2	2.66

Table A5.2. Perlite tests for rock samples  
in the East Mojave National Scenic Area,  
San Bernardino County, CA

[Sieve analyses of expanded perlite, values are % of sample retained on each sieve]

Sample	<u>Mesh Size</u>						
	20	30	50	70	100	140	PAN
CTN-58	0.0	8.8	35.8	15.5	14.3	15.2	10.4
CWC-069	2.0	22.0	50.5	14.4	6.1	4.0	1.0
CWC-018	1.6	27.1	51.0	10.5	4.6	3.5	1.7

The first part of the report is a summary of the work done during the year. It is followed by a detailed account of the work done in each of the four quarters. The report concludes with a summary of the work done during the year and a statement of the results.

The second part of the report is a detailed account of the work done in each of the four quarters. It is followed by a summary of the work done during the year and a statement of the results.

The third part of the report is a summary of the work done during the year and a statement of the results.

The fourth part of the report is a summary of the work done during the year and a statement of the results.

The fifth part of the report is a summary of the work done during the year and a statement of the results.

Table A-6. Descriptions and analyses of placer samples in the East Mojave National Scenic Area, San Bernardino County, CA

Sample No.	Site No.	Size (ft <sup>3</sup> )	Description	oz/yd <sup>3</sup>	\$/yd <sup>3</sup>
CMM-3-D	070	0.3	Sand, pebbly grav of dolostone and quartzite along dry bedrock downstream from quartz vein containing free gold. Gold is bright angular flakes less than 1 mm across.	0.00056	0.21
CMM-3-E	070	0.2	Sand, pebbly gravel of quartzite and dolostone in first 3.25 ft above dry bedrock. Gravel is at least 75 ft wide, 10 ft deep. About 600 ft downstream from quartz vein with free gold. Gold is bright, flat flakes less than 1 mm across.	.0123	4.67
CMM-8-D	060	0.1	Sand and pebbly gravel, dry, yellow, mainly from granitic rock and quartz veins, minor carbonates. Gold is bright, very angular flakes less than 1 mm across.	.00025	.095
CMM-8-M	059	0.1	Gray pebbly gravel, dry, with minor limonite and some caliche cement. Mostly from dolostone, limestone, minor granitic, metamorphic, quartzose rocks.	.00	.00
CMM-10-R	049	0.1	Silt, sand, and pebbles, dry, mainly schist, gneiss, and minor quartz.	.00	.00
CMM-11-34	089	0.1	Gray sand and pebbly gravel, dry, mainly limestone, dolostone, and granitic rocks.	.00	.00
CMM-11-62	088	0.1	Gray sand, pebbles, and cobbles, dry, mostly dolostone downstream from Copper World mine area.	.00	.00
CMM-14-F	032	0.1	Gray sand, pebbles, and cobbles, dry, mainly granitic rocks and carbonates.	.00	.00
CMM-14-X	036	0.1	Gray to tan sand, pebbles, and cobbles, mostly granitic rocks downstream from Green's mine area. Gold bright, very angular.	.00011	.04
CMM-16-41P	008	0.2	Gray to tan sand, pebbles, and cobbles, dry, mainly of granitic and carbonate rocks.	.00	.00
CMM-16-QP	028	0.1	Gray sand, pebbles, and cobbles, dry, mainly granitic rocks and dolostone.	.00	.00
CMM-16-QP	028	0.1	Gray sand, pebbles, and cobbles, dry, mainly granitic rocks and dolostone.	.00	.00
CMM-16-33	014	0.2	Gray pebbly dry gravel off dolostone bedrock.	.00	.00
CMM-16-34	014	0.2	Gray to tan, dry, unsorted, clay rich colluvial accumulation of pebbles and cobbles below Stonewall mine area.	.00	.00
CMM-17-I	010	0.1	Sand, pebbles, and cobbles, dry, mostly of gray dolostone and limestone. Gold bright and angular flakes less than 1 mm across.	.00019	.07
CMM-17-J	010	0.1	Brown silt, sand, pebbles and cobbles, dry, mostly of dolostone and limestone.	.00	.00

Table A-6. Descriptions and analyses of placer samples in the East  
Mojave National Scenic Area, San Bernardino County, CA--Cont.

Sample No.	Site No.	Size (ft <sup>3</sup> )	Description	oz/yd <sup>3</sup>	\$/yd <sup>3</sup>
CMM-20-C	107	0.1	Tan sand, pebbles, and cobbles, dry, mainly of dolostone and granitic rocks from sized piles at small trenches.	.00	.00
CMM-20-Y	109	0.2	Gray to tan pebble gravel, dry, mainly of carbonate rocks.	.00	.00
CMM-21-A	041	0.1	Gray to tan sand, pebbles, and cobbles, dry, mostly of granitic rocks, schist, gneiss, diorites, basalt, and gabbro.	.00	.00
CMM-22-B	001	0.1	Gray to tan silt, sand, and pebbles, dry, mainly of dolostone, schistose rocks, and granitic rocks in alluvial fan accumulation.	.00	.00
CMM-23-G	068	0.1	Gray to tan silt, sand, pebbles, and cobbles, dry, mainly of granitic rocks.	.00	.00
CMM-25-A	080	0.1	Gray to brown silt, sand, and pebbles, dry, mainly of dolostone and limestone, in lateral moraine.	.00	.00
CMM-25-B	080	0.1	Gray sand, pebbles, and cobbles, dry, mainly of dolostone from floor of dry stream bed.	.00	.00

Assumes that gold is pure and worth \$380/oz and that the samples expanded 25% upon excavation.